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retro* GAMER™ ANNUAL

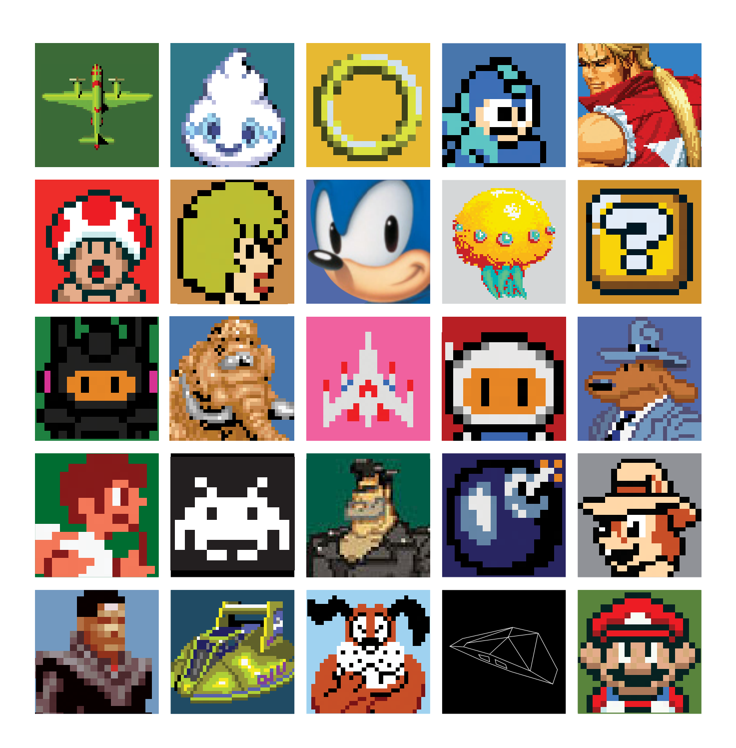
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WELCOME TO

retro* GAMER ANNUAL

Everyone remembers when they played their first videogame, whether it was in a smoke-filled arcade in the Seventies or tapping out some simple type-in games on their ZX81. Classic videogames are more popular than ever and we've taken this opportunity to collect our best content from the last year of the magazine. In this huge tome, you'll find the origins of the Neo-Geo and PlayStation, discover how *Space Harrier*, *Lemmings* and *Pokémon* were created and learn the history behind some of gaming's most popular genres. Whether you're a seasoned veteran or just like dipping in for a quick game of *FIFA*, you'll find this book absolutely essential.





Imagine Publishing Ltd
Richmond House
33 Richmond Hill
Bournemouth
Dorset BH2 6EZ
☎ +44 (0) 1202 586200
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Publishing Director
Aaron Asadi

Head of Design
Ross Andrews

Editor
Darran Jones

Senior Art Editor
Greg Whitaker

Designer
John Ndojelana

Photographer
James Sheppard

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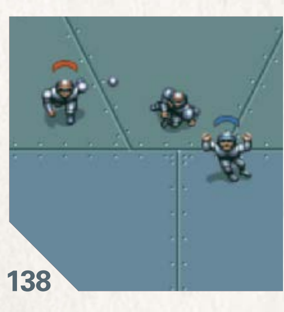


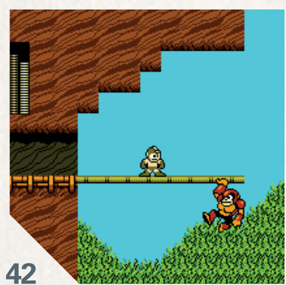
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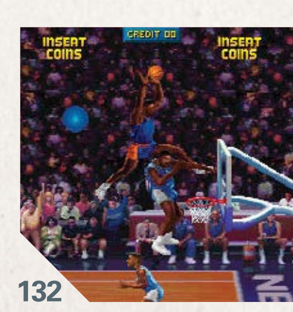
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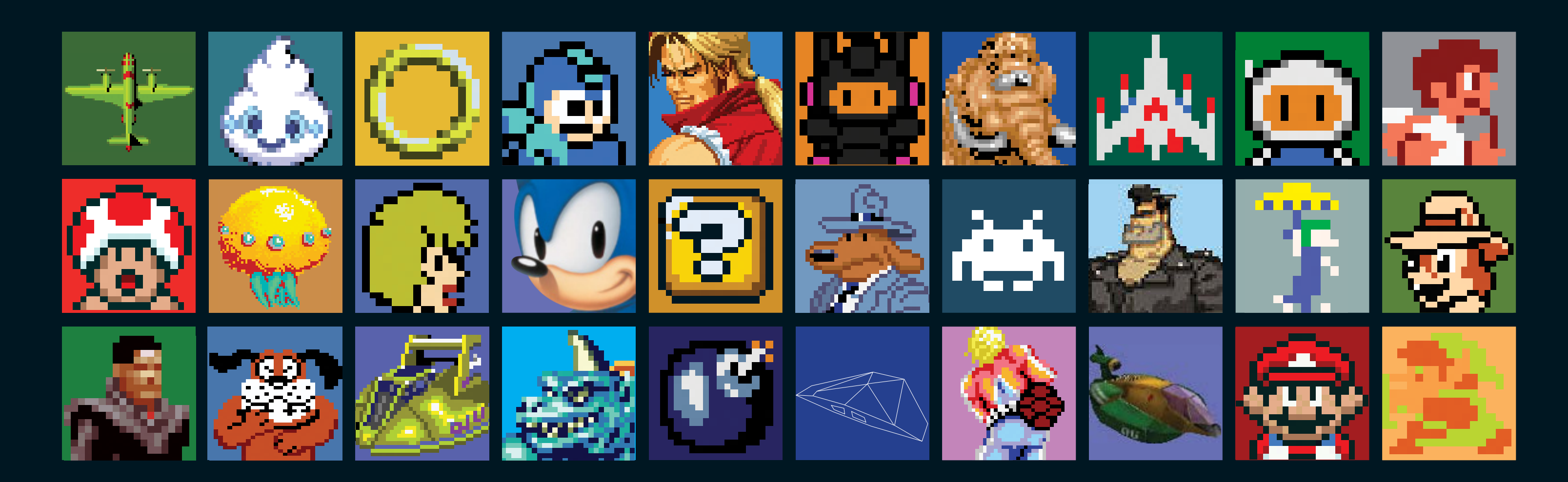
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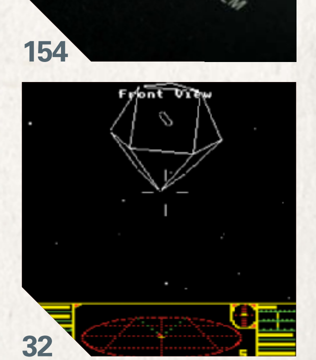
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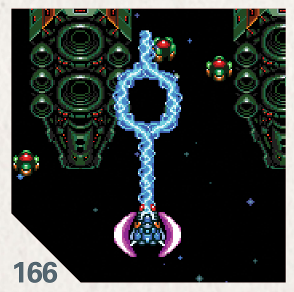
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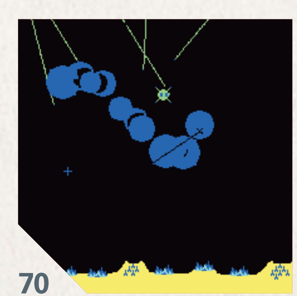
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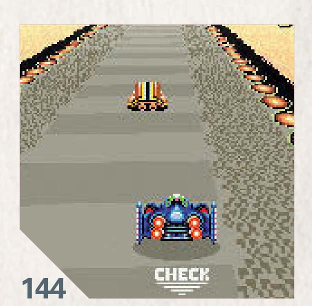
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THE GREATEST MULTIPLAYER

Call your friends, get some food in and pass out the control pads – Retro Gamer readers have voted on their favourite multiplayer games of all time. Nick Thorpe is your guide to these games night essentials…

GAMES EVER!

We don't know where we'd be without multiplayer. Interaction with other players was a staple of videogames long before there was a videogames industry to speak of, thanks to the likes of *Tennis For Two* and *Spacewar*, and it has endured despite the development of rich and engaging single-player experiences. No matter whether you took down a co-op game with your dad, treated your housemates to an elaborate victory dance or came *this close* to winning a tournament – the deeply personal stories that star you and your friends will always hit closer to home than even the best script from someone else.

We asked our readers to nominate their favourite multiplayer games of all time, to celebrate the games that have brought us together over the years. The results are interesting: collectively, you've overwhelmingly chosen local multiplayer over online favourites such as *Quake* and *Phantasy Star Online*, and there's a preference for competitive games to co-operative ones. What really hit us was the diversity of your choices – so instead of a regular old list with one winner, we've put together a list of awards that reflects the balance of voting in order to give all of your favourites their own deserved time in the spotlight. So without any further ado, on with the awards!

RETRO GAMER'S HOUSE RULES

- **Pausing without good reason is punishable by forfeit.**
- Co-op partners must always leave health pick-ups for the weak.
- **Cheats can be used if agreed by all parties before the game.**
- When the pizza arrives, the most recent winner goes to the door.
- **Oddjob is banned. No exceptions.**



BEAT YOUR FRIENDS

1 The feather is an invaluable shortcut tool, thanks to its high jump ability – learn where you can use it to skip huge parts of the track.

2 When Monty Mole latches onto you, you'll slow down and drop coins. Shake him off by hopping with the shoulder buttons.

3 Prioritise coin collection, as they'll raise your speed. If you lose them to shell hits later, make sure to get them back.

SUPER MARIO KART

DEVELOPER: Nintendo **YEAR:** 1992

It's no surprise that *Super Mario Kart* is being celebrated for its impact on multiplayer gaming – after all, the addition of split-screen play was its major contribution to the Mode 7 racing template Nintendo had established with *F-Zero*. But if the game's multiplayer had just been a technical development, it wouldn't be so revered today. *Super Mario Kart* was the perfect storm of technical prowess and carefully considered gameplay, and the result was possibly the best spin-off ever made.

While the colourful characters give the game a family-friendly look that lures players of all ages in, the truth is that *Super Mario Kart* is one of the most vicious racers of its era, thanks to the inclusion of weaponry that allows players to even the odds with their opponents. What starts out as Mario and his Mushroom Kingdom buddies having a nice race quickly degenerates into a shower of insults, as shells are flung with merry abandon. Thankfully, the inclusion of a battle mode allows players to forget any pretence of racing and just pummel each other with shells to settle their differences.

Despite the fact that *Super Mario Kart* has had so many sequels since 1992, it's the original that came out on top amongst readers. We can see why, too. While the sequels have added a variety of extra features, most notably the ability for more than two players to take part, the first game possesses a certain simplicity which the later games lack. In *Super Mario Kart*, you don't have to choose vehicles, master any drift techniques, or hope not to be robbed of victory by an untimely Blue Shell – just pick your racer and let the best player win. And let it be known that in a one-on-one 150cc Rainbow Road race, the best player will always, *always* be us.



KEY MOMENTS

It's the last lap of your final race. You're in second place, but you have one Red Shell and one final corner. You almost think you're going to miss as your opponent turns, but – WHAM! – it's a direct hit. You take the chequered flag.

FACE-OFF: SUPER MARIO KART

Whose shell will prove toughest to crack?

DARRAN VS **JON**

Darran pulls ahead early and it looks like he's got it in the bag, as Jon squanders a Red Shell. However, a timely star seals victory for our Art Editor in the penultimate lap.

HEAT 1

NICK VS **DREW**

Drew leads after the first lap, but is overtaken in the second and ends up developing an affection for walls to his own downfall, placing Nick in the final race.

HEAT 2

NICK VS **JON**

The pressure is weighing on both men, as neither player seems capable of staying on the track. A fall almost costs Nick, but Jon falls soon after and loses.

FINAL

WINNER NICK



» [SNES] *Street Fighter II* played a part in the success of the SNES. We remember giving our friends lessons so they could clean up in the arcades.

STREET FIGHTER II

DEVELOPER: Capcom **YEAR:** 1991

What better way to settle any quarrel than with a good old-fashioned one-on-one fight? Duelling was the number one method of conflict resolution for centuries for a reason – it's perfect. But what if there was a way of employing this tried and tested solution without putting your perfect smile or fancy new duds at risk? That's the very question that Capcom asked and immediately answered with *Street Fighter II*, arguably the game that birthed competitive fighters.

It was in *Street Fighter II* that roster variety was truly born, and many of us will have chosen an allegiance at an early age and never looked back. There are Shoto players, who managed to make the SNES pad bend to their Dragon-Punching will; there are charge players, who mastered the then-alien concept of holding one direction before pressing the opposite way and a button; there are Zangief players, who somehow got 360 degree motions and inputs to be read consistently. Fact is, you chose a side at that exact point in your life, and it's somewhat unlikely that you've moved on since.

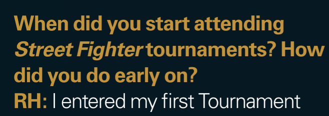
Even today, these characters all play in different manners, and that's what makes *Street Fighter II* such a perfect game. Each match-up plays out differently, with player-specific strategies and preferences further altering the dynamic to the point that no two matches are alike. There are depths to master in the special move motions and the accidental birth of the combo system, but normals and throws still pack enough of a punch to allow those who rely on basic tactics a decent shot at victory.

The series has evolved, but as much as the new technical elements add for expert players, they also detract from the purity that is such a huge part of *Street Fighter II*'s success. The ultimate one-on-one test of skill, *Street Fighter II* is a perfect brawler.

BY THE NUMBERS

Game	Share
STREET FIGHTER II	52%
STREET FIGHTER III: 3RD STRIKE	23%
TEKKEN 3	8%
MORTAL KOMBAT II	5%
OTHERS	12%





> "I simply played at the arcade when I could, that was all we had. No fancy console conversions with convenient training modes, no YouTube, just your local arcades"
>
> Ryan Hart on getting better

RYAN HART VS RYAN KING

The UK's most famous competitive fighting game player and our resident expert discuss their experiences on the tournament scene

When did you start attending *Street Fighter* tournaments? How did you do early on?

RH: I entered my first Tournament in 1994. It was *Super Street Fighter II Turbo*, held in London Trocadero and sponsored by Kiss FM. We had never had tournaments before that. It was a winner stays on timed tournament on ten machines. I got a few wins early on, but lost and then continually lost until the time ran out. It was a good experience though.

RK: I didn't attend *Street Fighter II* tournaments until after the release of *Hyper Street Fighter II*. I used to play as Hyper Fighting Chun-Li and my main tactic was to tick into throw off crouching medium kick and jumping light kick. It was enough to get past inexperienced players, but anyone who'd been playing *Street Fighter II* for a while steam-rolled me.

How did you work on improving your game?

RH: I simply played at the arcade when I could, that was all we had. No fancy console conversions with convenient training modes, no YouTube, just your local arcades. I played against the other players there and when I lost I tried to understand it and progress.

RK: Casino arcade in London had a *Hyper Street Fighter II* arcade cabinet and was home to the best players, so that's where I used to play. There were two players in particular, Shoji and Ryza, who were dominant but you'd face all sorts of players and all sorts of tactics. It was a great learning environment – everyone was so good, you had no choice but to level up and stamp out bad habits if you wanted to get anywhere.

What made *Street Fighter II* and its updates such a good multiplayer game?

RH: The heritage for *Street Fighter* takes it a long way. No matter who, they have probably heard about *Street Fighter* at some point and this makes it a strong social entity because it joins people together. *Street Fighter IV* for example, following its release in 2009, did a very good job of bringing players from all fighting games together.

RK: I think the main thing that made *Street Fighter II* such a compelling high-level game to compete in is that there is no margin for error at all. The damage is just so high that one mistake can cost you the round, and getting knocked down or trapped in the corner puts you in a really difficult situation. It also put a big emphasis on the match-ups – how Guile plays against Ryu is completely different to how he would play against, say, Dhalsim.



BEAT YOUR FRIENDS

1 Damage was toned down heavily in later games but *SFII* throws out a crazy amount of damage. Mash out a few jab strings to get your opponent blocking then toss them aside.

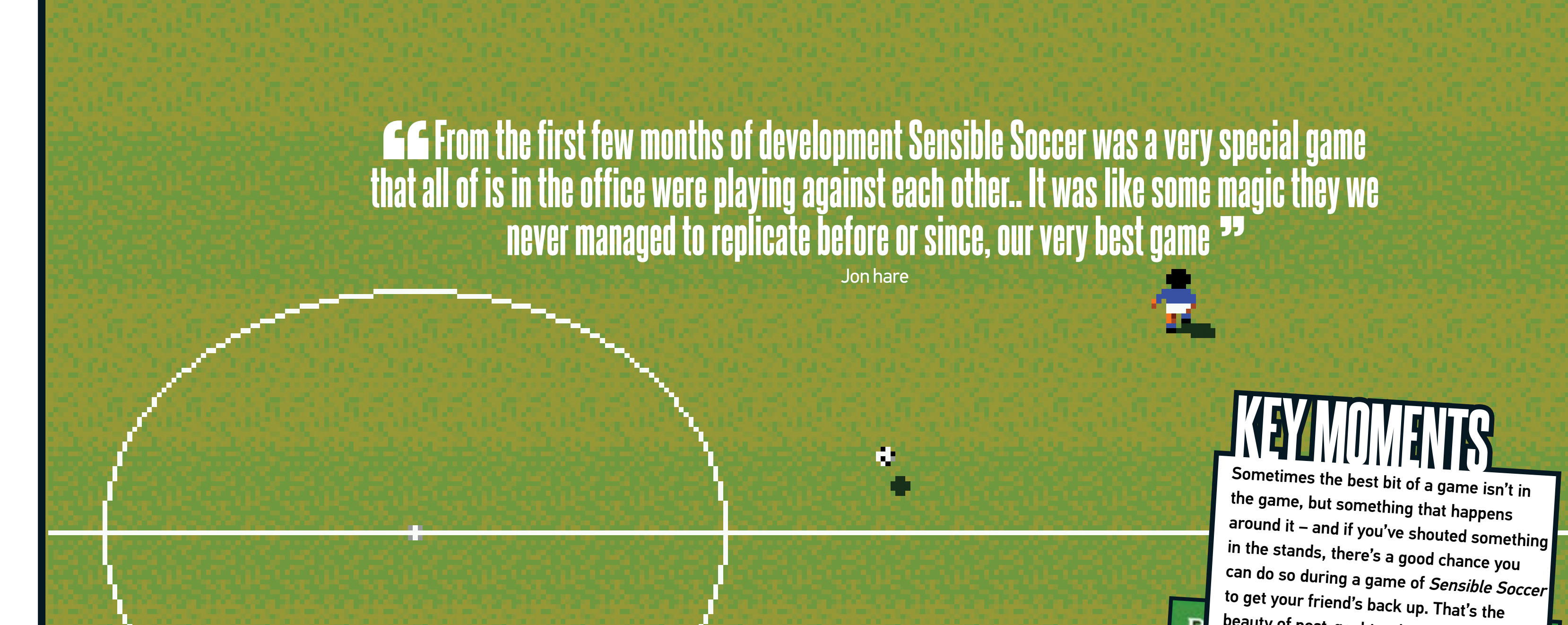
2 Being able to perform a Dragon Punch made you a god among *SF* players, and not that much has changed. Everyone still jumps too much. Punish them for it.

3 If they're gonna spam Blanka's electricity forever, pick a character who can deal damage at distance. Learn to play against the player rather than the character.



KEY MOMENTS

Managing to stun your opponent (it's way easier in *Street Fighter II* than other *Street Fighter* games) and using the downtime in the fight to either physically or mentally mock them before landing the killing blow. A thumbs-up to the face to rapid in-game crouching both work brilliantly. Perform your weird little send-off, then deliver the Shoryuken de grace.



> From the first few months of development Sensible Soccer was a very special game that all of is in the office were playing against each other.. It was like some magic they we never managed to replicate before or since, our very best game
>
> Jon hare

KEY MOMENTS

Sometimes the best bit of a game isn't in the game, but something that happens around it – and if you've shouted something in the stands, there's a good chance you can do so during a game of *Sensible Soccer* to get your friend's back up. That's the beauty of post-goal trash talk.

SENSIBLE SOCCER

BEST SPORTS GAME

DEVELOPER: Sensible Software **YEAR:** 1992

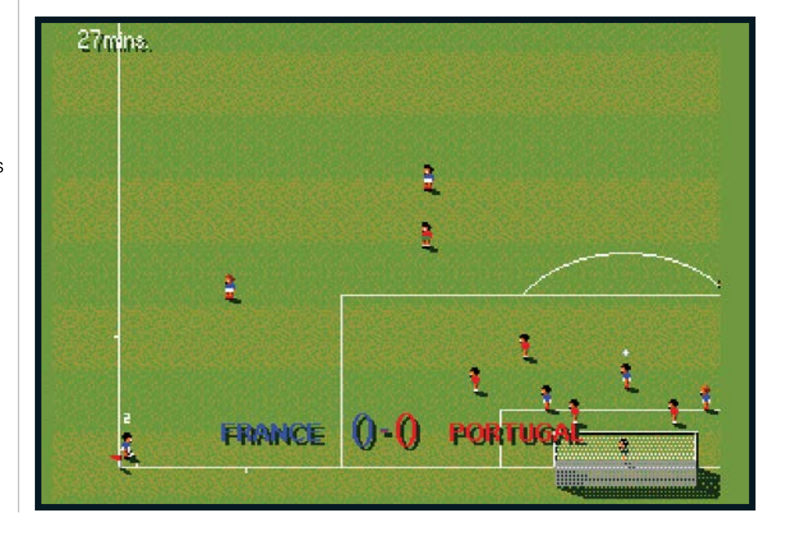
Was there any chance that *Sensible Soccer* would fail to win this category? Definitely – after all, it didn't reach number one in your list of the top 25 Amiga games, nor the top 25 sports games. However, football is a simple game and it's befitting that your favourite multiplayer sports game is a simple representation of it. It's easy to pick up *Sensible Soccer*, know what you're doing and get your players doing what you want – which is something that can't be said for *Speedball 2*, which requires more explanation of its rules, nor *Pro Evolution Soccer 4* which has rather more complex controls. It seems there's a lot to be said for accessibility!

While *Sensible Soccer* is an easy game to pick up and play, mastery takes a long time. As players improve, ball control becomes easier and curling shots go from being an consequence of controller manipulation to a formidable tool in the arsenal of your tiny strikers. And these are *your* tiny strikers, without a doubt – *Sensible Soccer* always boasted a great wealth of teams and even allowed you to edit them, enabling players to pick their favourites without having to compromise. We're always much more invested in a match when our pride as club supporters comes into play.

Of course, some readers will be asking why *Sensible Soccer* has won out over the improved sequel, *Sensible World Of Soccer*. The answer is simple: the original game received conversions to a variety of consoles that didn't receive the sequel such as the Mega Drive and SNES, ensuring greater name recognition. However, it's well worth mentioning *SWOS* – the successor to *Sensible Soccer* has kept the game alive, earning a port to the Xbox 360 and even drawing players from across Europe to the Sensible Days competitions. But while the original *Sensible Soccer* is no longer the choice amongst the most ardent fans of the series, its role as the foundation of an incredibly enduring game is worthy of recognition. It's fast and fun football – what more could you want from a sports game?

BY THE NUMBERS

- SENSIBLE SOCCER 10%
- SPEEDBALL 2: BRUTAL DELUXE 9%
- SENSIBLE WORLD OF SOCCER 5%
- PRO EVOLUTION SOCCER 4 5%
- OTHERS 71%





DOUBLE DRAGON

DEVELOPER: Arcade **YEAR:** 1987



Renegade was a good game, and Technos understood that – after all, the company wouldn't have followed up on it if it hadn't seen merit in it. However, it's hard to believe that the company knew quite what it was getting into with *Double Dragon*. By the mid-Nineties, the game had spawned various sequels, a crossover game with *Battletoads*, a cartoon series and a live action film. As well as all of that, it had clearly set the template for beat-'em-up peers in the arcade and at home. Why was *Double Dragon* such a success? We'd argue that it was because it was the first game to tap into a simple truth about beat-'em-ups: they're way more fun with a friend in tow.

Billy Lee and his brother, Jimmy, fight their way through an army of street punks to rescue the kidnapped Marian. The game itself is a logical step up from *Renegade*, adopting a similar style but allowing for two players to get into the action. What isn't easy to appreciate at first glance is the range of decisions made that actually mean something. For example, enemies can grab Billy or Jimmy from behind and prevent them from moving. Botched communication will lead to bad consequences too, as swinging wildly means you might hit your poor co-op partner – a capability which leads to one of gaming's most memorable twists. *Double Dragon* didn't just adopt multiplayer capabilities – Technos understood what made the inclusion worthwhile and worked to make it memorable.

All of the games that didn't quite win this award can claim to have descended from *Double Dragon* in design terms – *Final Fight* and *Streets Of Rage II* are more elaborate versions of the same idea. But while those games developed the formula, *Double Dragon*'s influence makes it your favourite multiplayer beat-'em-up.



KEY MOMENTS

Machine Gun Willy has been defeated and Marian has been rescued. So everything's good now, right? Not quite – there's still the unresolved matter of two jealous brothers who just happen to share a love interest. There's one more fight left, and this time it's against your very own co-op partner!

BY THE NUMBERS

- DOUBLE DRAGON 24%
- TEENAGE MUTANT NINJA TURTLES 13%
- FINAL FIGHT 9%
- STREETS OF RAGE II 7%
- OTHERS 47%

"While it's great fun to play with a friend, that final showdown is always in the back of your mind. . ."
Nick Thorpe



MEGA BOMBERMAN

DEVELOPER: Hudson Soft **YEAR:** 1993

We never imagined that pyromaniacs would be cute. That's probably due to our lack of preconceived notions about pyromaniacs more than anything else, but Bomberman is a confounding little guy – cute as a button, yet driven to murder his compatriots in acts of explosive violence. We're not sure why he does it, but what we do know is that we enjoy it, and evidently **Retro Gamer** readers share that love.

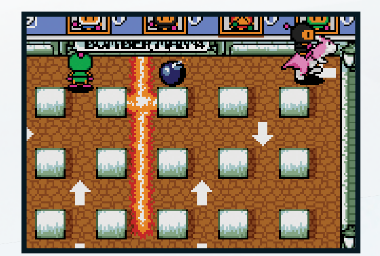
Mega Bomberman's greatest asset as a multiplayer game is the sense of tension it creates. A *Street Fighter* player can win the fight no matter how little health they have left, and a single mistake is unlikely to ruin your whole race in *Super Mario Kart*. In *Bomberman*, your default state is one of immense vulnerability, where a single hit is enough to end your round. This leads to fairly nervous behaviour in general, but by far the worst moment is being trapped by a bomb. It's a moment of sheer panic, quickly superseded by resigned acceptance of the fact that your round is over.

When four players of similar skill play *Mega Bomberman*, the fact that players are given equal starting points is almost irrelevant as the random distribution of power-ups quickly unbalances play and ensures that everyone can get a win. However, there are a number of surprising tricks an expert player can call upon to ensure your speedy detonation regardless of the odds against them.

We'd never say there's no such thing as too many explosions, primarily because we're familiar with the cinematic work of Michael Bay, but *Mega Bomberman* is the kind of game that almost tempts us to do so. Making your friends explode just never seems to get old, especially with the full roster of four players involved. It's always a nervy affair and there's never any shortage of shouting, but when all is said and done we've never had quite so much fun in a state of constant panic.

BY THE NUMBERS

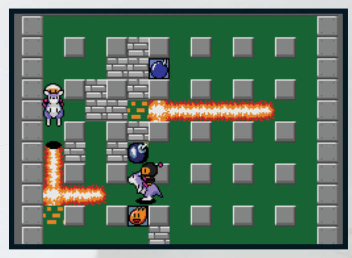
BEAT YOUR FRIENDS



1 After you kick a bomb, you can stop it mid-travel with the A button to trap an opponent or ensure that you attack the right lane.



2 If you kick a bomb off the side of the screen with a Louie, it'll bounce over the wall on the other side to kill unsuspecting opponents.



3 The purple Louie can be used to avoid blasts – if you time your jump just before the bomb detonates, you'll dodge it mid-air.

> "Mega Bomberman multiplayer was awesome fun, getting some of your mates round for a blast to see who was the best!"
>
> Jim Bagley



Everyone's got a short fuse in this war of all against all









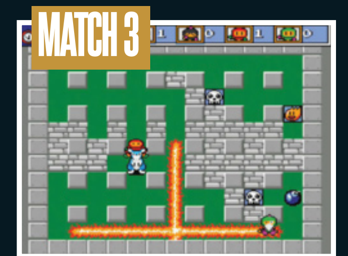
DARRAN





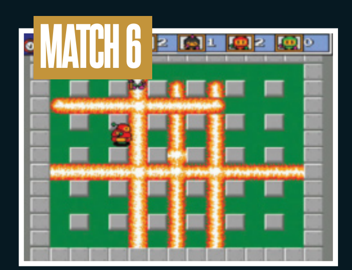
JON

MATCH 1



Jon blows himself up and Drew strolls into a blast. Our esteemed Editor manages to toast himself and Nick takes the round.

MATCH 3



Jon and Nick exit early, leaving Drew to fight Darran – who pulls ahead with a second victory after Drew is trapped in a corner.

MATCH 6

A victory for Darran ends the game here. Drew traps Nick early, but perishes in Darran's explosive lattice.



KEY MOMENTS

It's down to the last two players in the match, and one's at an advantage as they've got a Joey shielding them. But suddenly, a trap is sprung! The stuck player tries frantically to get out, but their dancing pink Joey is useless. It's all square now – game on. May the best bomber win.



WARLORDS



DEVELOPER: Atari **YEAR:** 1980

We've got to be honest – when it came to peripheral-aided gaming, we thought that *Rock Band* was going to run away with the vote. But there's still a huge amount of love for Atari's classic combat-oriented spin on the popular bat-and-ball games of the Seventies, and it's not hard to see why. The combination of *Quadrapong*'s four-player gameplay and *Breakout*'s block-breaking mechanics still makes for a fiercely competitive game, as players attempt to break down the fortifications of their opponents and take them out. As gameplay progresses, the stakes get higher as additional balls are added to the battlefield until only one player is left standing. The ability to hold a ball and choose where to fire it is the key mechanic here, as it allows you to victimise weaker players at the cost of some damage to your own wall. If you're fond of being a jerk to your friends during multiplayer games, it's a pretty great tactic – so naturally, it's one that we regularly employ to devastating effect.

Despite the fact that the arcade version was released well in advance of the home version, former Atari engineer, Carla Meninsky, has noted that the Atari 2600 version was developed first. While the arcade game is excellent, the home version was a very special thing – not only was it a four-player game on a machine that didn't have many four-player games, but it was one of the few games that made it worth busting out the paddle controller. The oldest game on our list is one that everyone needs to play – it's simple, but it is incredibly addictive with a few like-minded players in the room.

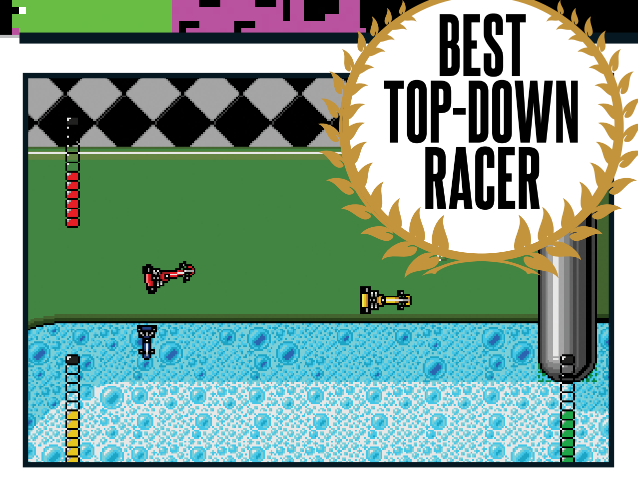
BY THE NUMBERS

- WARLORDS 62%
- ROCK BAND 13%
- PAC-MAN VS 7%
- THE HOUSE OF THE DEAD 2 3%
- OTHER 15%



KEY MOMENTS

The game has not been kind to you – having held the fireball too much and taken a few careless hits, you've got virtually no protective wall left. You've held out and kept yourself alive, but now a third fireball has joined the battle. Can you continue to survive?



MICRO MACHINES 2



DEVELOPER: Codemasters **YEAR:** 1994

One of the interesting things about multiplayer games is that there's something of a genre imbalance. Very few votes came through for RPGs, but some genres were heavily represented. In fact, racing games were so heavily represented as to dominate the voting, requiring we split the awards. Just as it was to be expected that a *Mario Kart* game would win arcade racers, a *Micro Machines game* was always going to be the top-down game of choice – it was just a question of which one. It's the second game that took the honours here, which makes sense as it was the first to introduce the innovative J-Cart technology, including two control ports in the cartridge to do away with the need for a multi-tap.

The key thing about the *Micro Machines* games is that the racing environments are pretty hazardous. Crossing the gap between tables by driving over a ruler is a cute nod to the size of the toys, but the drop from either side just invites some 'unintentional' barging that quickly turns into full-on vehicular war. Experts can easily be toppled by novices, simply by virtue of getting in the way of a non-braking opponent and being bashed off the edge, keeping the fun factor high. Additionally, the points-based racing set-up allows for some truly spectacular comebacks, as no player can ever be so far behind as to have no chance at winning. *Micro Machines 2* added to the fun of the original formula with additional vehicle types and improved course design, and with Codemasters' technological breakthrough backing up the excellent software, the series went from being simply fun to a legendary example of multiplayer gaming.

BY THE NUMBERS

- MICRO MACHINES 2 21%
- MICRO MACHINES 96 14%
- SUPER CARS II 14%
- SUPER SPRINT 7%
- OTHER 44%





GAUNTLET

BEST CO-OP GAME

DEVELOPER: Atari Games **YEAR:** 1985

Competitive games are more popular with the **Retro Gamer** readership than co-operative games, but there's an undercurrent of support for them – and the biggest game in the category by far was *Gauntlet*, the four-player dungeon crawling classic. Unlike some other four-player games, *Gauntlet* fixes the player roster so that each player can play only one of the four characters – Wizard, Warrior, Elf and Valkyrie. The team adventures through sprawling dungeons, fighting various monsters, collecting treasure, unlocking closed rooms and trying to find an exit – all while keeping their health up by regularly collecting food. It's a template which has influenced a variety of popular multiplayer games since – Blizzard's *Diablo* series and Sega's *Phantasy Star Online* are just two of the games that owe something to *Gauntlet*.

Gauntlet's appeal lies heavily in the smaller elements of its design. The fact that each character has a distinctive set of statistics means that every member of the team is useful in a specific situation – the elf doesn't excel at close combat, but makes up for it with ranged attack abilities. Additionally, the dwindling health supply makes finding food necessary, no matter how well you're all doing – which can create conflict as players snatch away items that might keep their friends going longer. Worse yet, they could shoot the food! Thankfully, the memorable audio clued players in to who needed feeding next, meaning that excuses were rather thin on the ground.

While home versions of *Gauntlet* weren't able to capture the arcade game's memorable action, the arcade game was popular enough to become your favourite co-op game – an impressive feat indeed.

BY THE NUMBERS

- GAUNTLET 16%
- BUBBLE BOBBLE 11%
- DOUBLE DRAGON 8%
- HALO 5%
- OTHER 60%





WORMS

BEST STRATEGY GAME

DEVELOPER: Team 17 **YEAR:** 1995

Life can feel pretty unfair when you're playing *Worms*. It's entirely possible for half of your team to be taken out by a well-placed bazooka blast before you've even had a chance to affect the game, and yet it's hard to feel truly bad about it. We think it's the voices that do it – it's hard to build any sort of true resentment when you are getting rather angry over tiny worms shouting, "Oi, nutter!" Besides, it's entirely likely that you'll be able to get your own back in spectacular fashion when you do finally get to take control.

The strategic combat of *Worms* takes cues from artillery games such as *Scorched Earth* and *Tank Wars*, and many of the weapons are fairly standard in the first game – players utilise Bazookas, Grenades, Shotguns and the like. However, the most popular weapons were the more comedic ones such as the likes of the Sheep and the Banana Bomb, which influenced the direction of the increasingly bizarre weapons in the sequels such as the Concrete Donkey.

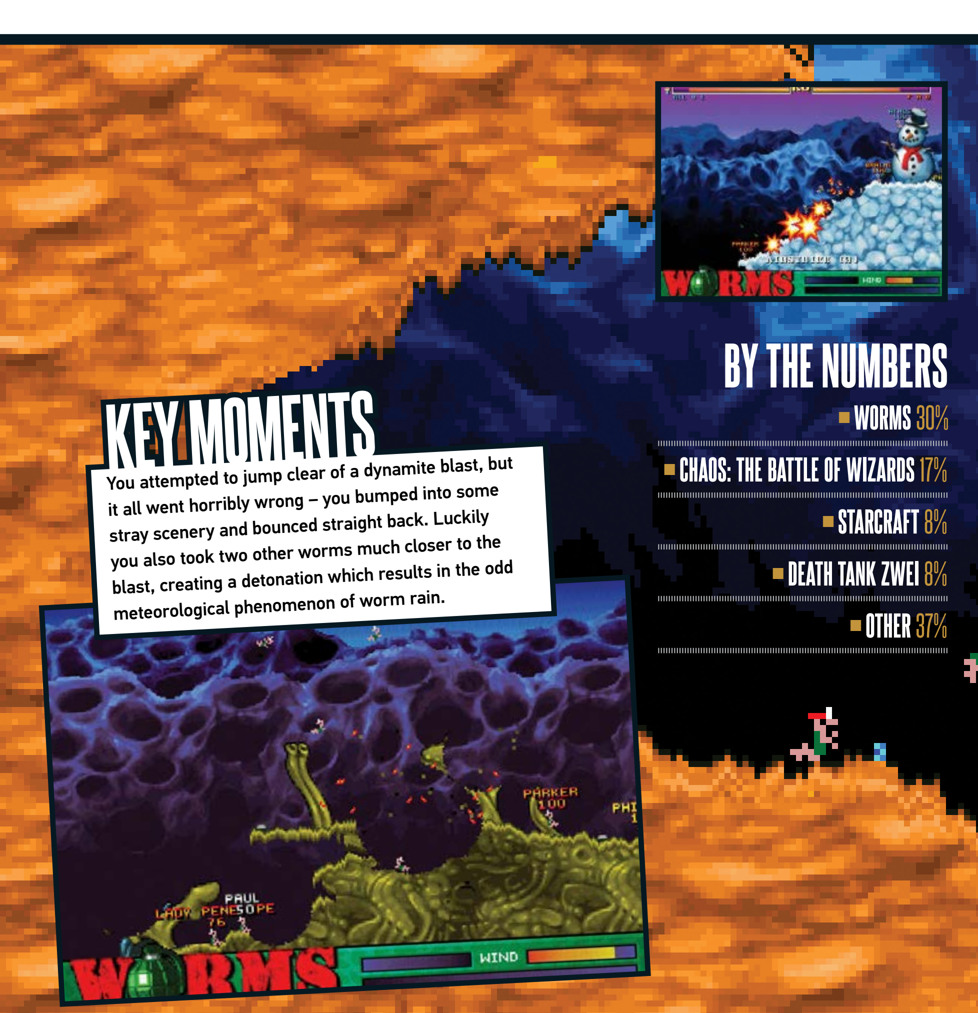
It's also worth noting that as a turn-based game, many versions of *Worms* support multiplayer without the need for any extra controllers, which is very useful when you're caught short. It's also one of those games that encourages extra-curricular competition – while we've often fought for supremacy in battle, we've just as often tried to see who can create the most carnage in a single shot. What's the best thing about that? Easy – the developers knew that would happen, and implemented awards and replays to show it off. Perfect.

BY THE NUMBERS

- WORMS 30%
- CHAOS: THE BATTLE OF WIZARDS 17%
- STARCRAFT 8%
- DEATH TANK ZWEI 8%
- OTHER 37%

KEY MOMENTS

You attempted to jump clear of a dynamite blast, but it all went horribly wrong – you bumped into some stray scenery and bounced straight back. Luckily you also took two other worms much closer to the blast, creating a detonation which results in the odd meteorological phenomenon of worm rain.



Q&A STEVE ELLIS

Programmer on GoldenEye 007



***GoldenEye*'s multiplayer mode was added to the game quite late in development. What prompted its inclusion?**

It certainly wasn't a planned feature in the beginning. We were nearing the end of development and despite being far past our original intended release date, we thought that it would be a nice feature to have, so we set about trying to implement it. We didn't know whether the N64 would be powerful enough to handle it, so step one was establishing that it could work at all. Once we had got it working, it very quickly became a feature that we couldn't ship without. It was obviously going to be a lot of fun.

What challenges did you encounter while coding the multiplayer component?

Aside from the obvious technical challenge of getting it running at all on a platform that has something like 1 per cent of the power of your smartphone, the main challenge was that up to that point, the game didn't have any concept of 'players'. It didn't need to, because we had never intended there to be multiple players. All of the code assumed that there was one player in the game. Visibility calculations, rendering order, collisions, etc. were all considered a part of the overall game state. That needed to change, which required a tedious process of making changes across the whole codebase to introduce the concept of multiple players, each having their own state, and then resolving all of the issues which that had created.

Do you have a favourite stage to play in *GoldenEye*'s multiplayer?

My favourite level overall was, I think, the Temple, although I always enjoyed playing the Complex with Proximity Mines, or the Library with Golden Guns…

Did you expect that players would still be enjoying *GoldenEye*'s multiplayer mode so long after the game was released?

I had no idea. I just wanted to make a good game. For almost all of us on the team, we were new to the industry and it was our first game, so we didn't really know what to expect after release – but no, I don't think any of us expected to be still receiving emails about it fairly regularly after nearly 18 years.

> "I've lost count of the number of hours I've wasted on this classic. Even my wife succumbed to the charms of James Bond, and many nights were lost playing this classic shooter. An instant multiplayer classic that's a delight to play"
>
> Darran Jones

BY THE NUMBERS

GOLDENEYE 007	31%
HALO	8%
UNREAL TOURNAMENT	6%
TIMESPLITTERS 2	6%
OTHERS	49%



GOLDENEYE 007

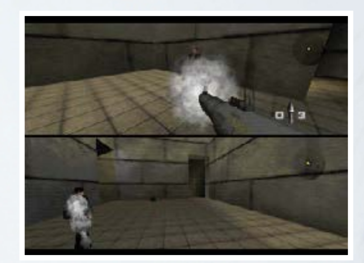
DEVELOPER: Rare **YEAR:** 1997

GoldenEye 007 is the multiplayer game that we almost didn't get. It's crazy to think that one of the most beloved multiplayer games of all time was a single-player game for most of its development – but that's the truth. It wasn't until late in development that the beloved deathmatch mode was added, and only then as an afterthought. You wouldn't have known it though, as *GoldenEye* was perhaps the best-realised multiplayer game of its era. As well as featuring a variety of excellent maps and weapons, the game featured a variety of excellent and thematically appropriate gameplay variants, from the two-life shootout of You Only Live Twice mode to the powerful one-hit kill action of The Man With The Golden Gun mode.

The impact of *GoldenEye* is hard to overstate, too. It's worth remembering that when *GoldenEye* arrived, many players were still not tremendously familiar with first-person shooters. While the likes of *Wolfenstein 3D* and *Doom* had popularised the genre on PC, console players had only recently begun to receive such games frequently – and even then, *Doom* had only had link cable multiplayer on PlayStation, greatly limiting its audience. *GoldenEye* didn't just offer an uncommon split-screen option in a fairly exotic genre, but justified the N64's inclusion of four control ports in the process.

Much of *GoldenEye*'s appeal is in the peripheral stuff beyond the core experience. The cheats seem just as valid an addition as the main modes, with big heads and paintball genuinely adding to the experience – and if you don't believe us, just ask anyone who has disguised a mine with paint splatters. Meanwhile screen-cheating, the act of looking at your opponent's display to figure out their location, is such an integral part of the genre that there's now a whole game based on it. While *GoldenEye*'s golden formula developed through *Perfect Dark* and the *Timesplitters* series, it's the original that still commands the most love among multiplayer enthusiasts, and we'd still gladly invite any of you to grab a pad and indulge in some Power Weapons action. Just don't be *that* guy and pick Oddjob. Nobody likes that guy.

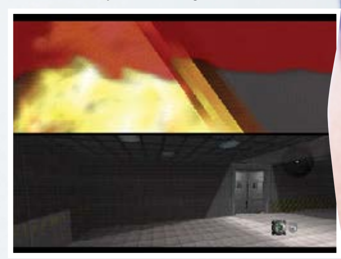
BEAT YOUR FRIENDS



1 Aim your Rocket Launcher at the opponent's feet – it's easier to kill your opponent with a rocket's blast radius rather than hit them.



2 Avoid running in patterns. Try to vary your routes through the level, and zigzag around when you are being chased.



3 Memorise the level layouts. It sounds obvious, but you'd be surprised how often our own Proximity Mines have killed us...

KEY MOMENTS

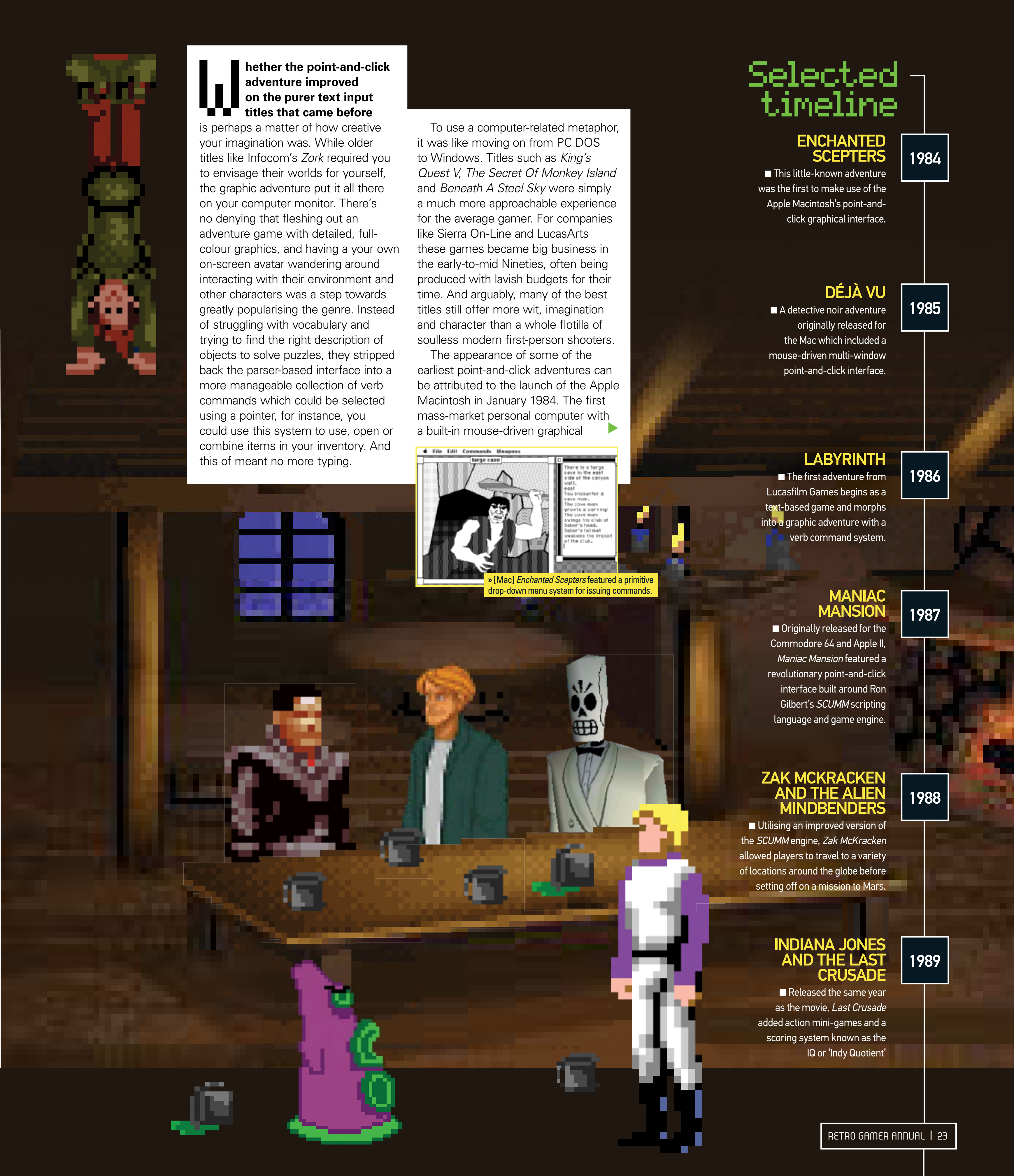
You've split the honours, a dozen games each, but it's now stupid o'clock in the morning and your friend suggests a decider: Slappers Only, Licence To Kill. The silliest of game modes has you both running around trying to lethally karate chop one another, while laughing like lunatics.





Once a mainstay of PC gaming before the inevitable rise of the first-person shooter, the spirit of the point-and-click adventure lives on in games like L.A. Noire and The Walking Dead. Mike Bevan looks at how we got there...

FROM POINT TO CLICK



Whether the point-and-click adventure improved on the purer text input titles that came before is perhaps a matter of how creative your imagination was. While older titles like Infocom's *Zork* required you to envisage their worlds for yourself, the graphic adventure put it all there on your computer monitor. There's no denying that fleshing out an adventure game with detailed, full-colour graphics, and having a your own on-screen avatar wandering around interacting with their environment and other characters was a step towards greatly popularising the genre. Instead of struggling with vocabulary and trying to find the right description of objects to solve puzzles, they stripped back the parser-based interface into a more manageable collection of verb commands which could be selected using a pointer, for instance, you could use this system to use, open or combine items in your inventory. And this of meant no more typing.

To use a computer-related metaphor, it was like moving on from PC DOS to Windows. Titles such as *King's Quest V, The Secret Of Monkey Island* and *Beneath A Steel Sky* were simply a much more approachable experience for the average gamer. For companies like Sierra On-Line and LucasArts these games became big business in the early-to-mid Nineties, often being produced with lavish budgets for their time. And arguably, many of the best titles still offer more wit, imagination and character than a whole flotilla of soulless modern first-person shooters.

The appearance of some of the earliest point-and-click adventures can be attributed to the launch of the Apple Macintosh in January 1984. The first mass-market personal computer with a built-in mouse-driven graphical

» [Mac] *Enchanted Scepters* featured a primitive drop-down menu system for issuing commands.

Selected timeline

ENCHANTED SCEPTERS — 1984

■ This little-known adventure was the first to make use of the Apple Macintosh's point-and-click graphical interface.

DÉJÀ VU — 1985

■ A detective noir adventure originally released for the Mac which included a mouse-driven multi-window point-and-click interface.

LABYRINTH — 1986

■ The first adventure from Lucasfilm Games begins as a text-based game and morphs into a graphic adventure with a verb command system.

MANIAC MANSION — 1987

■ Originally released for the Commodore 64 and Apple II, *Maniac Mansion* featured a revolutionary point-and-click interface built around Ron Gilbert's *SCUMM* scripting language and game engine.

ZAK MCKRACKEN AND THE ALIEN MINDBENDERS — 1988

■ Utilising an improved version of the *SCUMM* engine, *Zak McKracken* allowed players to travel to a variety of locations around the globe before setting off on a mission to Mars.

INDIANA JONES AND THE LAST CRUSADE — 1989

■ Released the same year as the movie, *Last Crusade* added action mini-games and a scoring system known as the IQ or 'Indy Quotient'



Know your Point-and-click Adventures

GRAPHIC ADVENTURE
■ An adventure game that displays visual representations of locations visited. In most point-and-click games the background scrolls with the player's on-screen character.

POINT-AND-CLICK INTERFACE
■ An icon-driven system for issuing in-game commands by clicking on verb options, exits or inventory items using a mouse, or more recently, touch-screen devices.

OBJECT HIGHLIGHTING
■ Many adventure games bring up text descriptions of objects or notable features when users hover their mouse pointer over them, making it easier to find items in each location.

NPC
■ A non-player character that the user can converse or interact with. In games like *Lure Of The Temptress* NPCs have their own AI and ability to roam around at will.

CUTSCENE
■ A non-interactive sequence that progresses the story. The term was coined by Ron Gilbert for *Maniac Mansion*, the first point-and-click adventure to use them.

DIALOGUE TREE
■ In most point-and-click adventures, users are able to choose from several alternative pre-written dialogue responses when in conversation with other characters.

UNWINNABLE SITUATION
■ Early point-and-click adventures, such as *Maniac Mansion* and *Kings Quest V*, allowed players to get into situations where they couldn't complete the game.

NO DYING PHILOSOPHY
■ From *Loom* and the first *Monkey Island* game onwards, LucasArts adopted a policy of eliminating player deaths and unwinnable situations from their games.



» [C64] *Labyrinth* was a collaboration between Lucasfilm Games' David Fox and Douglas Adams.

» [Amiga] The unfortunate Sandy Pantz gets in a pickle in *Maniac Mansion.*

» An original design document for *Maniac Mansion* showing the layout of the proposed point-and-click interface.

interface, the Mac leant itself to experimentation by developers. Released the same year, the first Mac point-and-click adventure title was *Enchanted Scepters* by Silicon Beach Software. Although at first glance it didn't look a lot different from previous graphic adventures, with static locations drawn in a window and a text descriptions alongside them, players selected commands via a drop-down menu. The following year's *Déjà Vu* by ICOM Simulations was even more innovative, offering a full point-and-click interface including an inventory with draggable objects, and a list of performable actions – examine, open, close, speak, operate, go, hit, and consume – that could be selected using the mouse.

Another innovative title was the debut adventure by Lucasfilm Games, the company that would later give us *Monkey Island* under the re-branded guise of LucasArts. Released in 1986 for the Commodore 64, *Labyrinth* was a curious hybrid of text and graphic adventure based on the Jim Henson movie of the same name. After an opening segment in which players typed their actions into a text parser, the game morphed into a graphic-driven storyline where you could choose your actions from an onscreen list of commands using the joystick.

"This was Douglas Adams' idea," says programmer David Fox, revealing the link between *The Hitchhiker's Guide to the Galaxy*'s author and the origins of the point-and-click adventure. "A team of us from Lucasfilm Games went to the UK to brainstorm with Douglas and lots of wacky ideas came out of the week long meetings we had. The idea was to pay homage to *The Wizard Of Oz* where it starts in "normal reality" in black and white, and when Dorothy finally lands in Oz, it's in full glorious Technicolor."

"The game equivalent to black and white is of course a text adventure," continues David. "We didn't open it up to full colour animation until you entered the Labyrinth through the movie screen at the neighbourhood movie theatre (which was playing the film, *Labyrinth*, of course). We thought the command system worked pretty well. Since we also let you select the items on the 'slot machine' user interface with cursor keys, as well as the first letters of the words, you could interact pretty rapidly."

> **"There was a great sense of power in being able to use SCUMM with characters"**
> Noah Falstein

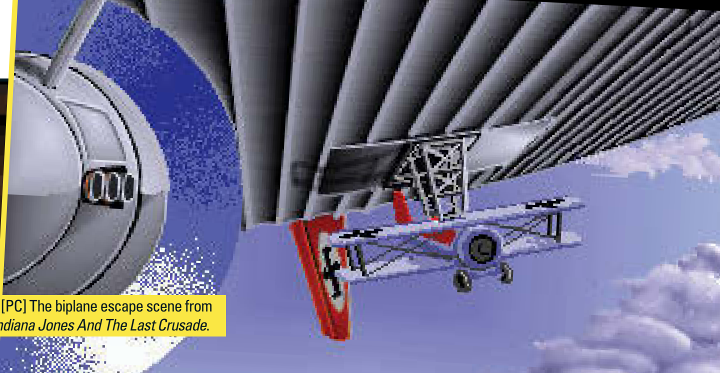




Lucasfilm Games designer Ron Gilbert and graphic artist Gary Winnick took the next logical step in creating a fully menu-driven adventure with the following year's *Maniac Mansion*. "I played the *King's Quest* games as I was starting out thinking of *Maniac Mansion* and the thing that always bothered me was the parser," says Ron. "It was really a matter of not wanting to type or 'second-guess' the parser, it just made more sense to me to just point at an object and 'touch' it if you wanted to manipulate it. *Maniac Mansion* was really the game that started the whole point-and-click adventure thing, with the verb interface and everything."

Taking place in the creepy mansion owned by the Edison family, the game had a bizarre *Scooby Doo*-style plot where three teenage characters teamed up to rescue kidnapped a kidnapped cheerleader called Sandy Pantz. Players could 'warp' between

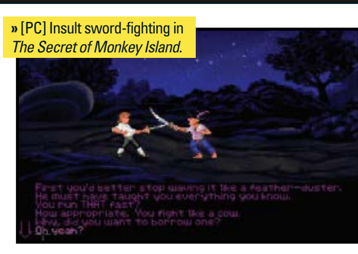
» [Amiga] A worrying news bulletin in *Zak McKracken And The Alien Mindbenders.*



» [PC] The biplane escape scene from *Indiana Jones And The Last Crusade.*

each of the three protagonists in the game, which proved an interesting mechanic for solving puzzles. "There's a couple of puzzles in *Maniac Mansion* that I really liked because somebody had to shut off the lights, and someone else had to flip over here, and somebody else had to do the generator," comments Ron.

As he began programming, Ron realised that "coding the whole game in 6502 was nuts" and began working on the game's other radical feature, the *SCUMM* scripting system. The beauty of *SCUMM* was that it encompassed both a script-driven game engine and easy to learn programming language, allowing LucasArts' designers to construct adventure games quickly without resorting to programming from scratch. It was also cross-portable allowing


» [PC] Insult sword-fighting in *The Secret of Monkey Island.*

SCUMM games to be converted to other computer platforms painlessly. It would come to be the backbone of nearly all of the developer's forthcoming adventure catalogue.

"I do vividly remember the fun of wiring up a room for the first time, and sending the characters around," remembers Noah Falstein, co-designer of *Indiana Jones And The Last Crusade.* "There was a great sense of power in being able to use *SCUMM* with pre-generated characters, and to be able to rough-out


» [PC] Bernard runs into an old friend in *Day Of The Tentacle.*

a scene or a dialog tree in less than an hour and see how it played out." *SCUMM* also allowed designers to easily flesh out each game's environment with points of interest to interact with, and even add scriptable cutscenes, a first for adventure games. "It's important in games to do a lot of the storytelling with the environment," adds Ron. "Players spend a lot of time looking at the screens, and it's great to use that to get small or funny details across, even if they are missed by a lot of players."

What makes a great Point and Click adventure?

The best features to craft a quest of extra epic proportions

STORY IS EVERYTHING
■ Some of the best point-and-click adventures can provide narratives that rival Hollywood blockbusters.

SENSE OF CHARACTER
■ LucasArts excelled in memorable characters. The *Secret Of Monkey Island* has enough for a dozen games.

EXOTIC LOCATIONS
■ You can see all these sights and more in a good point-and-click adventure. Their stories can take you across the globe and beyond.

Where do you think YOU'RE going, fancy-pants?

Give Pick up Use
Open Look at Push
Close Talk to Pull

MAKE 'EM LAUGH
■ Despite the brilliance of 'serious' adventures, it's the funny moments in games that are often most enjoyable.

LOGICAL PUZZLES
■ Nobody likes to get stuck in an adventure and most point-and-click puzzles hit that sweet spot in terms of difficulty.

WEIRD STUFF
■ We love puzzles that involve bizzare items like *The Secret Of Monkey Island*'s strange rubber chicken with a pulley in the middle.

Selected timeline

1990

LOOM
■ A music-inspired adventure from LucasArts, it introduced the more player-friendly concept of no failures or deaths.

THE SECRET OF MONKEY ISLAND
■ The most impressive and accessible of LucasArts' adventures to this point, the pirate-themed *Monkey Island* was a highly influential and memorable adventure.

KING'S QUEST V
■ The first adventure from Sierra On-Line, this was one of the first games of its type to be released on CD-ROM with voice acting provided by members of Sierra's staff.

1991

MONKEY ISLAND 2: LECHUCK'S REVENGE
■ This splendid sequel offered a much larger game world than the original and two levels of difficulty, one of which with extra puzzles.

LEISURE SUIT LARRY IN THE LAND OF THE LOUNGE LIZARDS
■ A remake of the risqué 1987 graphic adventure, replacing the outdated text parser with a point-and-click driven interface.

1992

INDIANA JONES AND THE FATE OF ATLANTIS
■ An original Indy adventure scripted by screenwriter Hal Barwood, *Fate Of Atlantis* featured a globe-trotting storyline involving discovering the whereabouts of the fabled lost city.

LURE OF THE TEMPTRESS
■ The first adventure from British developer Revolution Software, *Lure of the Temptress* utilised the Virtual Theatre system which gave non-player characters the ability to wander around under their own AI.

DARK SEED
■ A psychological horror adventure with artwork by Alien-designer H. R. Giger, this was one of the first hi-res point-and-click games at the request of Giger himself.



» [PC] The 1991 remake of the original *Leisure Suit Larry* in the *Land Of The Lounge Lizards*.

» [PC] Sierra's *King's Quest V* was the company's first adventure to utilise a point-and-click graphic interface.



» [PC] Revolution's rather impressive debut: *Lure Of The Temptress*.

The second game to use the *SCUMM* system, David Fox's *Zak McKracken And The Alien Mindbenders*, broke away from the confines of a claustrophobic mansion, allowing players to jet around the world in the guise of a hapless newspaper journo countering a world stupidity epidemic. "I wanted to do a 'New Age' themed game," says David, "but I wanted to find a way to take all that and present it in a game that also was uplifting, fun and funny. I also wanted to make the game take place on a global… er, multi-global scale…" he adds, referring to Zak's later involvement in a bizarre co-ed mission to Mars. The game was the first to introduce a digital MIDI soundtrack to LucasArts adventures.

Indiana Jones And The Last Crusade also leant itself to global bullwhip-equipped shenanigans, and was a collaboration between several LucasArts designers. It added a number of action sub-games, in keeping with Indy's character in the originating movie. "Ron and David [Fox] were both better scripters than I, having honed their skills, so I focused more on elements of designing the action mini-games (boxing, biplane flying, etc)" says Noah. "Our approach with that game was to let the player spend most of his time in parts of the storyline not shown in the film, and we had the advantage of working with the original script. The boxing ring at Indy's college was actually based on some of the opening scenes that they cut, and the business with the radio operator on the Zeppelin was also in the movie. Indy actually refers to it in a line of dialog as he and his father board the biplane. "

Brian Moriarty's fantasy adventure *LOOM* was another early *SCUMM* title, featuring a unique musical interface where players could 'weave' spells or objects using four-note tunes. It was also the first LucasArts adventure to feature the 'no dying' philosophy taken up by the subsequent *Monkey Island* series and subsequent games. "I was particularly interested in making a game that would be easy for beginners to play and, most important, to complete," says Brian. "I wanted *LOOM* to be a game where it would be impossible to get stuck in dead ends or unfair puzzles, or put yourself in an un-winnable situation."

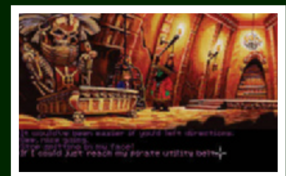
> "Monkey Island was the first game where I felt that I had once-and-for-all figured out what an adventure game should be"
> Ron Gilbert

But it was with *The Secret of Monkey Island*, released in 1990, that LucasArts' finally hit the gold standard for point-and-click adventure games. Inspired by Disney's *Pirates Of The Caribbean* theme-park ride, the game introduced the bumbling but lovable would-be pirate Guybrush Threepwood, and his arch nemesis, the zombie buccaneer LeChuck. Designed by Ron Gilbert, Dave Grossman and Tim Schafer, it was a game that could be thoroughly enjoyed by both seasoned adventurers and beginners. "*Monkey Island* was the first game where I felt I had once-and-for-all figured out what an adventure game should be," Ron admits. "It was just a much cleaner, tidier game." With the addition, we might add, of a rubber chicken with a pulley in the middle,

Aside from the great characterisation and writing, the beautifully depicted environments, and the inability to 'die' (bar a single

Five essential games

Looking for adventure? Here are a few of our favourite point-and-click titles to try



MONKEY ISLAND 2: LECHUCK'S REVENGE
■ 1991 ■ PC, AMIGA, MAC

After kicking undead pirate butt in the first game, Guybrush returned in this final outing from Ron Gilbert. Roughly four times the size of the original, it featured four new islands to explore as our plucky hero searched for the legendary Big Whoop with the help of voodoo curses, carnival outfits and a curiously flexible monkey.



GABRIEL KNIGHT: SINS OF THE FATHERS
■ 1993 ■ PC, MAC

Set in New Orleans, Sierra's classic 'occult noire' adventure follows the exploits of the rare book store owner, Gabriel, as he investigates several grisly local murders that plunge him into a disturbing voodoo underworld. A remake from original writer Jane Jensen with improved graphics and new puzzles was released last year.



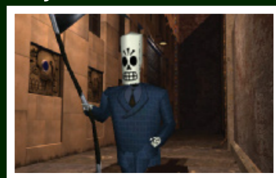
BENEATH A STEEL SKY
■ 1994 ■ PC, AMIGA, iOS

With some of the most striking graphics yet seen in an adventure game courtesy of *Watchmen* illustrator Dave Gibbons, Revolution's second release built on the 'Virtual Theatre' concept to create a believably stark futuristic world. A remastered edition, which was released for iOS devices in 2009, made the game available to modern audiences.



BLADE RUNNER
■ 1997 ■ PC

Westwood's take on the cult Ridley Scott movie allowed fans to revisit locations from the film while playing a completely seperate storyline with an entirely new character, the replicant-hunter, Ray McCoy. Similar Revolution's previous games it featured NPCs that wandered about with their own agenda, real-time gameplay and a staggering thirteen different endings.



GRIM FANDANGO
■ 1998 ■ Various

Inspired by Aztec Mythology and the crime novels of Raymond Chandler, Tim Schafer's *Grim Fandango* marked the first foray for LucasArts into 3D point-and-click adventures. Telling the story of Manny, a skeletal dogsbody employed by the Department Of Death, its humour, writing and characterisation is sublime, and the game is due for a re-release this year.

Simon Woodroffe

Simon was a key designer on the Simon the Sorcerer adventure games and The Feeble Files, and more recently became Creative Director at Rare



What were your earliest memories of playing point-and-click style adventures? Were any instrumental in inspiring you to create your own adventure games?
My earliest strong memories are the Sierra series (*King's Quest*, *Police Quest*, *Space Quest* and, when my parents weren't looking, *Leisure Suit Larry*). However, I was playing adventure games long before and appreciated the narrative focus and cerebral mechanics of them a long time before the interface to them changed to point-and-click! My father and his team had built several text based adventures and I'd been over to see the Adventure International office in Florida. Having said all that, it was *Monkey Island* that inspired me to want to make these types of games more than any other.

Do you think the point-and-click interface helped make adventure games more popular than the previous text parser games?
Without any doubt. It was far more accessible for people to have the potential choices narrowed down to a certain set of verbs and objects to play with, the reduced abstraction meant that the games were more relatable and you had the chance to see the wonderful art, animation and music to go along with the narrative. Nowadays I think designers can make the choice and still find an audience (I'd suggest *A Dark Room* as a great text adventure for those that haven't played it).

What's your favourite point-and-click adventure?
Le Chuck's Revenge. Of course!

What do you think about the return of the genre with projects like *Double Fine Adventure* and others on Kickstarter? Do you think people still have a fondness for that style of game?
The audience has always been there. People love stories! The 'style' of adventure games is arguably the purest vessel to tell them without all that mechanics nonsense getting in the way.

notable occasion) one thing particularly stands out. *Monkey Island* is genuinely really funny. Take for instance the simple solution to Guybrush escaping from a watery death tied to a rope with various sharp objects just out of reach. Or the concept of 'insult sword-fighting' where players have to come up with suitably witty responses to various adversaries' taunts, and then re-adapt them on meeting the infamous Sword Master.. "During the early stages *Monkey Island* we would watch old Errol Flynn-era pirate movies," comments Ron on this clever mechanic. "One thing that stood out was during the fights they always taunted each other with insults. I knew we needed to have sword fighting in the game – it was about pirates after all – but I didn't want to introduce any action gameplay and the old pirate movies provided us with the perfect solution…"

Though it had been successful with various instalments of the *Kings Quest* adventure series, along with franchises like the tongue-in-cheek *Leisure Suit Larry* games, LucasArts' competitor, Sierra, had been caught behind in the point-and-click development race. But in the same year that *Monkey Island* appeared the company finally released a title of its own. "The early *Leisure Suit Larry* and *King's Quest* adventures were graphic adventures but they still required typing," says former Sierra designer and creator of *Leisure Suit Larry*, Al Lowe. "*King's Quest V* was the first Sierra point-and-click game, and that changed everything. The point-and-click interface made the games much more accessible. My next game was *Leisure Suit Larry 5*, then Jim Walls did *Police Quest III* and Scott Murphy wrote *Space Quest IV*, all with the new interface. And I remember that all of our games were suddenly much easier, not because there were less puzzles but because people didn't have to worry about misspelling or guessing which words to use. We hadn't realised how so much of the puzzle-solving was purely down to the interface. And so of course, after that we put in more puzzles!"

The following year, Guybrush, along with love-interest Governor Marley, the mysterious Voodoo Lady, and the dread-pirate LeChuck returned alongside numerous brand new characters in *Monkey Island 2: Le Chuck's Revenge*. Much larger than the first game, it featured a more open structure with Guybrush being able to visit several islands, Scabb, Phatt,



» [PC] Westwood's *Legend Of Kyrandia* allowed players to drag onscreen items straight into their inventory.

Selected timeline

1993

DAY OF THE TENTACLE
■ *Maniac Mansion*'s sequel featured a time-travelling plot and full-screen animated graphics, inspired by Looney Tunes director Chuck Jones.

SIMON THE SORCEROR
■ A humorous fantasy adventure from British outfit Adventure Soft, *Simon* was another of the first adventures with full voice-acting.

SAM & MAX HIT THE ROAD
■ LucasArts animator Steve Purcell's canine and rabbit detective duo had previously cropped up in the *Monkey Island* series but now they got their own game.

GABRIEL KNIGHT: SINS OF THE FATHERS
■ Created by Sierra writer Jane Jensen, *Gabriel Knight* was possibly the finest of the company's adventures to this point, with its mature themes and dark storyline.

MYST
■ A first person adventure that dropped players on an island full of contraptions and puzzles, *Myst* used video and pre-rendered graphics in a way that amazed audiences.

1994

BENEATH A STEEL SKY
■ Taking place in a dystopian future Earth, Revolution's second adventure was notable for its striking hand-painted backdrops.

1995

FLIGHT OF THE AMAZON QUEEN
■ This tribute to *Monkey Island* and *Indiana Jones* was made on a small budget compared to LucasArts's games but compared favourably.

DISCWORLD
■ The first in a series of adventures based on Terry Pratchett's fantasy novels, the game was notable for being extremely challenging.

FULL THROTTLE
■ Tim Schafer's first project as lead designer, this biker adventure was the first from LucasArts to be released only on CD-ROM.



Point and Puzzled

WARNING – Possible Spoilers!!

Did you work out these head-scratchers?

THE SECRET OF MONKEY ISLAND

■ **The Puzzle:** Trapped underwater tied to a fabulously (heavy) idol after an unfortunate encounter with Sheriff Fester Shinetop, Guybrush has five minutes to escape from a watery end.



■ **The Solution:** The sharp pointy objects just out of reach are all red herrings. Guybrush simply has to pick up the idol and get out of the sea. Surprisingly some people did actually manage to get stuck here.

DAY OF THE TENTACLE

■ **The Puzzle:** Clumsy Laverne has got stuck in a tree in the future forcing Hoagie to rescue her from the past with the help of the Chron-o-John ™ and the first President Of The United States Of America.



■ **The Solution:** By painting the kumquat tree in cherry red you can convince Washington to cut it down, which means it no longer exists in the future, and frees the unfortunate Laverne.

SAM & MAX HIT THE ROAD

■ **The Puzzle:** Our intrepid freelancers must extricate their assignment orders from a mysterious courier prior to setting of on their adventures, but where and how do they find him?

■ **The Solution:** The courier turns out to be a kitten on the doorstep outside the pair's office. To get the papers you have to 'use' Max on him, who'll take care of the situation in his own special way...

THE CURSE OF MONKEY ISLAND

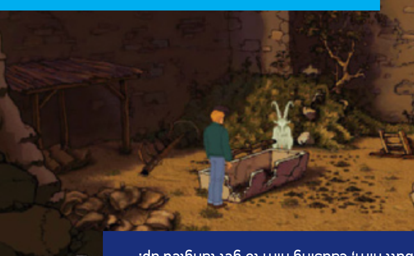
■ **The Puzzle:** Guybrush must get hold of a map to Blood Island to un-curse his beloved Elaine in a long-winded puzzle involving a chimp and the infamous devil chicken, El Pollo Diablo.



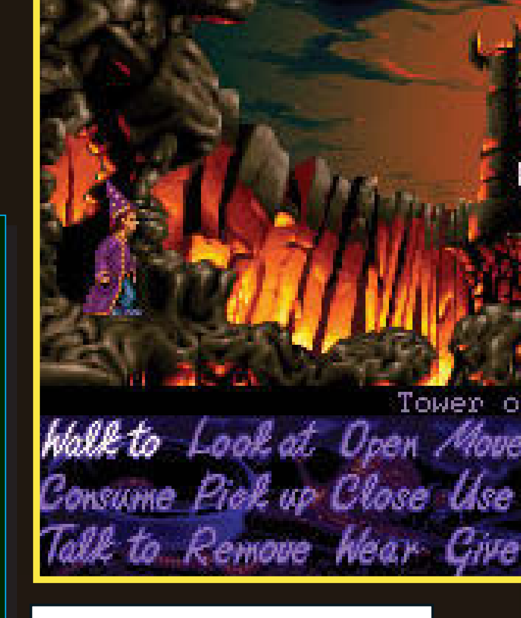
■ **The Solution:** By cutting the plank on the ship at Danjer Cove you'll end up getting tarred and feathered. Make a scary entrance at Blondebeard's restaurant then use the book on Captain LeChimp.

BROKEN SWORD: THE SHADOW OF THE TEMPLARS

■ **The Puzzle:** While attempting to reach Lochmarne Castle in Ireland, George Stobbart comes across a stubborn old goat that won't let him pass in the game's most notorious puzzle in the game.



■ **The Solution:** Unlike the logic puzzles previously in the game, the solution is time sensitive. George must click on the nearby farm machinery at a critical point after the goat tries to butt him, causing him to get tangled up.



Booty and Dinky, in his quest for a mythical treasure called Big Whoop. It also marked the debut of the iMUSE interactive music system that provided a more atmospheric, context-sensitive soundtrack. Despite the excellence of the first game, *Monkey Island 2* bettered it in many departments, and is still one of the most highly regarded point-and-click adventures of all time.

**Another studio that came late to the genre, fresh from developing the groundbreaking *Eye Of The* ***Beholder* RPG series, was Westwood Studios. "We were certainly aware of *Kings Quest* and other graphic adventures but were probably much bigger fans of the LucasArts games like *Monkey Island* due to their humour," says Westwood co-founder Louis Castle. The company's first point-and-click adventure, The *Legend Of Kyrandia*, displayed an obvious affection for the fantasy setting of the *King's Quest* games, with long-suffering hero Brandon attempting to save his land from the curse of an evil jester named Malcolm." The game was developed with Sierra in mind as publisher, but was later released by Virgin Interactive. "I clearly remember feeling we had something special and evolutionary for the genre with Kyrandia which was certainly of interest to Sierra but we never sealed a deal before selling to Virgin," explains Louis. The series went on to include two further sequels, each starring a different protagonist, finishing with Malcolm himself in the final outing of



» [PC] Indy in Cairo in *Fate Of Atlantis*.

» [PC] *The Simon The Sorcerer* games featured the voice of Chris Barrie.

the series, *Malcolm's Revenge*.

British company Revolution Software entered adventure game market in 1992 with its debut, *Lure Of The Temptress*, also published by Virgin. What set the game apart from its competitors was the *Virtual Theatre* engine, which populated the various locations of the game with computer-controlled characters going about their daily business, shopping, chatting and wandering from place to place. "I felt we had to create not just a new gaming engine but something really different to what else was out there," says Revolution founder Charles Cecil. "So we spent £20,000 on producing the *Virtual Theatre* engine – a core piece of programming that would allow us to string commands together that would have an effect on in-game characters. Over the course of that year, we managed to crack it and so we were ready to produce our first game."

"These technology concepts [NPCs wandering around] were certainly unique. But Revolution was not sure how to develop them further in subsequent games. Nonetheless, the result was a quirky and entertaining adventure game that kicked off Revolution's fondness for characterisation and in-game humour. Historically in adventures, everything is driven by the player. But I didn't want to play those games any more. I wanted games that make you feel like you're part of a living world, rather than one that is static and reactionary. Most adventure people were just changing the story and knocking out the same game. That is very old school and I wanted to try to alter that."

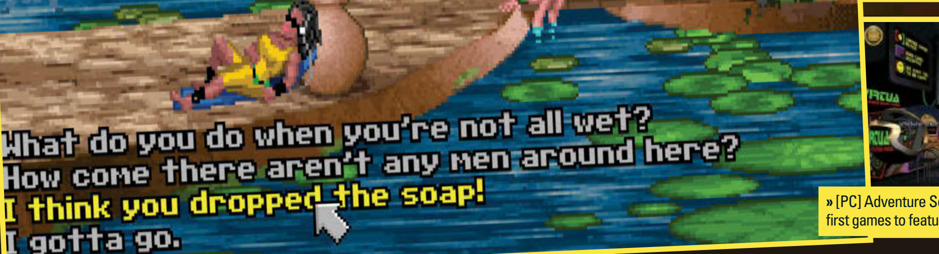
> **"I clearly remember feeling that we had something special and evolutionary"**
> Louis Castle

Another British-based developer Adventure Soft released inspired fantasy point-and-click adventure, *Simon The Sorcerer*, in 1993. Parodying books like *The Lord Of The Rings* and *The Chronicles Of Narnia*, along with well-known fairytales, it starred a teenaged hero whisked into a magical world. *Simon The Sorcerer* was one of the first adventures to utilise full voice acting for its protagonist, courtesy of the *Red Dwarf* series' actor, Chris Barrie.

» [PC] Tim Schafer's *Full Throttle* was one of the only later LucasArts games that allowed player deaths.

"Simon was inspired by *Monkey Island* and the *Discworld* books," says writer and hero namesake Simon Woodroffe. "Chris Barrie was in my mind when writing scripts for *Simon*… I find it much easier to write if I imagine an actor I know well speaking the lines. I suppose it must have been quite a novelty for him to do a game. I think he cost £3000 pounds a day, which seemed reasonable to us." As well as the humour and rich visual design from the LucasArts adventures, *Simon* borrowed the established point-and click interface that the company had helped evolve. "There was a standard already set by LucasArts titles and it worked, so why change it?" says Simon. "Our focus was on telling our stories and making people laugh."

It seems that Guybrush's antics were an influence on a number of adventure game creators, including Australian ▶



» [PC] Passing the soap in *Flight Of The Amazon Queen*.



» [PC] Torin's Passage featured hand-drawn animation by Jim Murphy, later animator on Pixar films including *Toy Story 2* and *Ratatouille*.

» [PC] Adventure Soft's *The Feeble Files* was one of the first games to feature hi-res pre-rendered 3D graphics.

Selected timeline

1996

THE DIG
■ Inspired by a short story by Steven Spielberg, *The Dig* was a grandiose CD-ROM release from LucasArts, this time with a strong sci-fi theme.

BROKEN SWORD: THE SHADOW OF THE TEMPLARS
■ The first game in Revolution's historically-inspired adventure series, *Broken Sword* introduced players to the series' hero George Stobbart.

1997

THE FEEBLE FILES
■ Adventure Soft produced this excellent sci-fi comedy adventure starring a green alien voiced by *Red Dwarf's* Robert Llewellyn.

THE CURSE OF MONKEY ISLAND
■ The first *Monkey Island* game to be developed without Ron Gilbert, *Curse* was LucasArts' final 2D adventure and featured more subtle comedy.

BLADE RUNNER
■ Westwood's cutting-edge adventure saw the appearance of a 3D rendered protagonist in a game world that progressed in real time.

THE LAST EXPRESS
■ From *Prince Of Persia's* Jordan Mechner, this was an ambitious adventure set on the Orient Express at the outbreak of World War I.

1998

GRIM FANDANGO
■ Often cited as one of the best of LucasArts adventures, this highly original game from Tim Schafer used 3D characters superimposed on static backdrops to great effect.

1999

THE LONGEST JOURNEY
■ Developed by Norwegian outfit Funcom, this was a spectacular and critically-acclaimed adventure with a lush fantasy setting, a memorable female lead character, and a complex and involving storyline.

2000

ESCAPE FROM MONKEY ISLAND
■ The final original *Monkey Island* adventure from LucasArts, featuring 3D graphics which proved controversial to the fans of the previous games.

» [PC] *The Broken Sword* series now spans five games, with the most recent released in 2013.

developer John Passfield, whose point-and-click outing *Flight Of The Amazon Queen* was directly inspired by LucasArts' pirate odyssey, with a little bit of *Indiana Jones* thrown in. "Seeing *Monkey Island* was a light bulb moment," says John. "I loved movies, comics and storytelling and I was very impressed with the mouse-driven interface. It's one of those things that when you first see it you think 'Of course! Why didn't I think of that?'"

At LucasArts, the popularity and critical acclaim lauded on the first two *Monkey Island* games meant that the company could invest in producing further *SCUMM* engine adventures with larger budgets, including the superb *Indiana Jones And The Fate Of Atlantis*, and the time-travelling *Maniac Mansion* sequel *Day Of The Tentacle*. Meanwhile, there were plenty of options from other developers for stepping into unusual point-and-click roles, including a nautical Poirot-style detective in Delphine's *Cruise For A Corpse*, a Soviet intelligence officer in Cryo's *KGB*, a 1930's adventurer in Dynamix's *Heart Of China*, or even a Wild West chemist in Al Lowe and Sierra's *Freddy Pharkas: Frontier Pharmacist*. Revolution Software released the stunning *Beneath A Steel Sky*, a futuristic cyberpunk adventure

"I loved the graphic adventures we produced that I didn't work on, like Loom and Monkey Island"
David Fox

with background graphics by Dave Gibbon's, co-creator of the Watchmen comic-book series. Adventure Soft published a *Simon* sequel, *Simon The Sorceror II: The Lion, The Wizard And The Wardrobe,* and Sierra writer Jane Jenson created the excellent debut in her *Gabriel Knight* series, a surprisingly mature and dark excursion into the underworld of New Orleans. With the range and breadth of product available by the mid Nineties, the point-and-click adventure really had come of age.

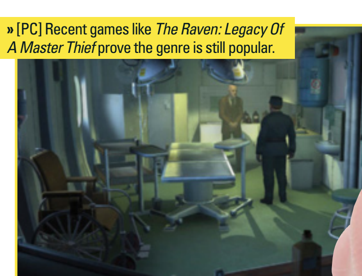
Developers began pushing the graphic capabilities of newer PCs and consoles like the PlayStation with full-screen animated cutscenes and CD-ROM based video segments, notably in LucasArts releases like *Sam & Max Hit the Road*, *The Dig*, and *Full Throttle*. Other games like Revolution's *Broken Sword: The Shadow Of The Templars*, Sierra's Torin's Passage and Jordan Mechner's *The Last Express* took a similarly cinematic approach, with techniques like rotoscoping, producing games that gave the impression of interactive cartoons.

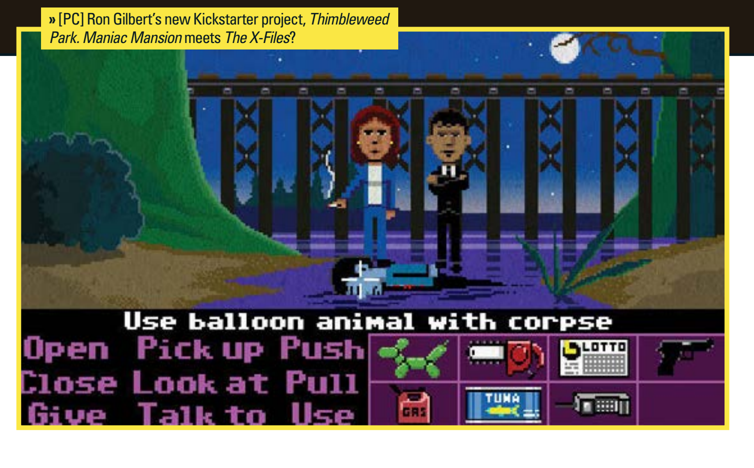
With the arrival of PC 3D graphics cards and the rising popularity of games like *Doom* and *Quake* there was a desire to move away from the traditional 2D cell-animation derived look of the adventure releases up to that point. Cyan's *Myst* demonstrated how pre-rendered 3D graphics, delivered from CD-ROM, could be used to create an enticing and immersive interactive world. Another ambitious title, Westwood's *Blade Runner* was the first adventure of its kind to include 3D polygon character models, and was also notable for featuring a game world that progressed in real time.

"For *Blade Runner* we needed to adapt the context sensitive mouse to a true 3D space," says Louis Castle. "We used a complex database to mostly eliminate the typical text selections. We could infer from your progress what you were likely to be interested in and ask those questions with a single click. You could also turn on the text trees to specifically ask questions for a more traditional feel. The true 3D was manageable because we always knew where the camera was in a scene and how it would travel to the next."

Adventure Soft delivered *The Feeble Files*, a sci-fi outing with a similar sense of humour to its Simon games, but "We were feeling a bit of writer's block with *Simon*," says Simon Woodroffe. "It felt like a good time to have a break and many people on the team pitched characters and ideas for alternative stories. An alien world allowed the whole team to try out new things and the character of Feeble was about the opposite of Simon as you can get. I was also a big fan of *Doctor Who*, *Red Dwarf*, *Star Trek* and *Blake's Seven*."


» [PC] The recent 20th Anniversary remake of *Gabriel Knight: Sins of the Fathers*.


» [PC] Recent games like *The Raven: Legacy Of A Master Thief* prove the genre is still popular.



» [PC] Ron Gilbert's new Kickstarter project, *Thimbleweed Park*. *Maniac Mansion* meets *The X-Files*?

LucasArts' Grim Fandango, a 3D evolution of the older *SCUMM* games designed by Tim Schafer, was influenced by Origin's action-adventure *Bioforge*. Like *Blade Runner* it featured 3D characters superimposed over pre-rendered backgrounds. Its game engine, *GrimE*, was also employed for the company's final original adventure release, *Escape From Monkey Island*, published in 2000. But the passing of the Nineties seemed to mark the apparent demise in commercial viability of big-budget point-and-click adventure games, despite the critical acclaim heaped on late-era titles like *Grim Fandango* and Empire Interactive's visually gorgeous *The Longest Journey*.

However it seems that in the decade since then, the adventure game has made something of a comeback. Re-mastered versions of the first two *Monkey Island* titles, along with the likes of *Beneath A Steel Sky*, *Gabriel Knight*, *The Last Express*, *Grim Fandango* and Revolution's *Broken Sword* games have allowed a new audience to experience classic point-and-click adventuring on modern PCs and devices like Apple's iPhone. Episodic releases like Telltale Games' rebooted *Sam & Max* and *Tales From* Monkey *Island* have proved popular, and its *The Walking Dead* series has been critically acclaimed for its moral choices which can radically alter the unfolding storyline. Even one of the biggest games of recent years, Rockstar's *L.A. Noire*, is essentially a big-budget point-and-click adventure. And successful Kickstarter projects such as Tim Schafer's *Double Fine Adventure* and Ron Gilbert and Gary Winnick's upcoming *Thimbleweed Park*, a new multi-character adventure in the style of *Maniac Mansion*, have shown that the market is still hungry for new point-and-click adventure games. "From the beginning, we knew we wanted to make something that was a satire of *Twin Peaks*, *X-Files* and *True Detective*," says Ron about his recently funded new venture.

"I loved the graphic adventures that we produced that I didn't work on, like *Loom* and *Monkey Island*," admits David Fox, one of those responsible for refining the genre in the early days at Lucasfilm Games. "I don't think I was aware at the time that I was helping to define a new type of graphic adventure game. I think our goal was creating puzzles that made people laugh with joy when they solved them. We wanted people to have that 'a-ha!' moment when they figured it all out… Maybe our legacy was the storytelling we had in our games, along with attention to detail. I'm hoping our legacy was just great fun." ✱


» [PC] *The Longest Journey* received rave reviews on its release in 1999.


» [iOS] *The Secret of Monkey Island: Special Edition* featured remastered HD characters and backgrounds.

Selected timeline

2002 — SHERLOCK HOLMES: THE MYSTERY OF THE MUMMY
■ An enjoyable yarn by Frogwares which has received nine sequels.

2003 — THE BLACK MIRROR
■ An interesting horror game that's set in an extremely creepy mansion. Although it drew praise for its aesthetics, its voice acting and puzzles weren't as good. It's been followed by two sequels.

THE ADVENTURES OF FATMAN
■ Michael Doak's game received plenty of acclaim due to its use of the *Adventure Game Studio*.

2005 — BONE: OUT FROM BONEVILLE
■ TellTale's first adventure easily channelled the point-and-click games of old, while introducing TellTale's now well-used episodic structure.

2006 — SAM AND MAX SAVE THE WORLD
■ Steve Purcell's classic characters returned and it felt that they'd never been away. Two sequels followed.

2011 — L.A. NOIRE
■ Underneath the impressive face technology and high budget is a fairly average adventure, albeit a great homage to classic film noir.

2012 — THE WALKING DEAD
■ Of the many TellTale adventures that have been released this is easily the best. It's a captivating piece of work that forces you to make tough decisions and witness harsh brutality.

2013 — BROKEN SWORD 5: THE SERPENT'S CURSE
■ The fifth *Broken Sword* game was a Kickstarter-funded project that was released in two parts. It adds little new to the genre, but it's nice to see George and Nico again.

2015 — GRIM FANDANGO SPECIAL EDITION
■ The classic LucasArts adventure was remastered by Tim Schafer's Double Fine. *Day Of The Tentacle* will follow in 2016.


ELITE
SPECIAL



When Elite launched in 1984, its 3D graphics and sandbox gameplay were revolutionary. Now, 3 decades on, co-creator David Braben talks to David Crookes about the impact of the series and his new game, Elite: Dangerous

There can be very few people who have not heard of the masterpiece of programming that is *Elite*. Some have compared it to *Citizen Kane*, the Orson Welles film classic of 1941, but while we perhaps wouldn't go that far, there's no denying the sheer impact of Ian Bell and David Braben's game.

With a feeling of isolation that only a bleak universe can bring yet punctuated by the possibility of action, *Elite* could be both lonely and arresting. Flights would be suddenly interrupted by a space war or an opportunity to steal and trade. Different worlds would lead to different possibilities. Players could take basic machinery, food and raw materials from an agricultural world and sell it to an industrial one. They could operate on the black market, dealing in slaves, narcotics and firearms.

In 1984, this kind of sophistication in a game was incredibly advanced and yet there was an early chance that *Elite* would never even see the light of day. Infamously, Thorn EMI turned it down, put off by realistic physics and out-of-this-world gameplay that dispensed with multiple lives and the usual game mechanics of the day. But when Acornsoft got its hands on it, the firm knew it had something special.

From the moment it was shown off at a press launch in Thorpe Park – one of the first games to receive this kind of treatment – *Elite* caught the imagination of both the gaming and non-gaming press and went on to spawn three sequels. "That event created so much evangelism for the game and it was clear that people wanted it," David Braben tells us.

ELITE

On 20 September 1984, a true game changer was launched. Its name was Elite and it would go on to influence countless videogames for years to come. Created by university undergraduates Ian Bell and David Braben, it presented players with a vast, open 3D world. Gamers would set off from the planet Lave in a Cobra Mk III spacecraft with little more than 100 credits to their name. On their journey through the galaxy, they would become a space pirate, making their virtual living through trade, in a game that dispensed with multiple lives and time limits and simply aimed to absorb the player in the experience.

WHY I LOVE ELITE

■ *Elite* proves that the impossible is possible in 32K of RAM. And it's fun too. *Elite* was also one of the first games that generated stories based on escapades you had in the game.

GRAEME DEVINE, DEVELOPER OF THE 7TH GUEST

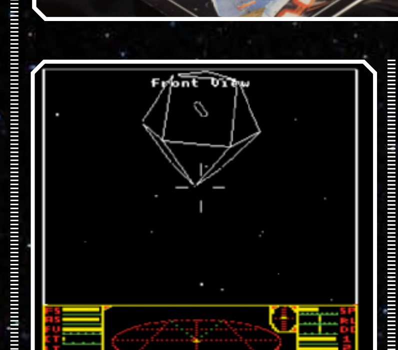


Elite has been a very influential game, but what was it that influenced you?
A lot of different factors came together at the same time. I read science-fiction books avidly, but the late Seventies was also the period when sci-fi first started to appear at the cinema, with *Star Wars* being the most obvious one. It had some of the atmosphere that I'd got from the books whereas TV – the likes of *Star Trek* – didn't really cut it. TV programmes were a bit too removed somehow and the same could be said for games at the time. I was more negatively influenced.

Which games caught your imagination at the time?
When we were writing *Elite*, we played games like *Defender*, *Galaxian* and *Pac-Man*. But I also liked *Philosopher's Quest*. What I liked most was the way you saved your position and the way the pace of the game was a bit more measured. Most of the other games that I played were a frantic few minutes and then a frustrating death.

Did you want to produce something different to those?
Games like *Space Invaders* or *Defender*, where you would get an extra smart bomb at 5,000 and an extra life at 10,000, felt so regimented. I thought "what if you got two smart bombs and no extra life?" I would want to choose. I also thought games were structured too much around the coin drop and so many home computer games were just direct derivatives of arcade games. I wanted to have much more considered games where you could stop and save your position and come back the following evening.

» The sheer wealth of content found in *Elite* puts many current special editions to shame.



» [BBC Micro] You can switch between different viewpoints, further adding to *Elite*'s immersion.



» [BBC Micro] So tell us. Where do you want to go today? The possibilities are endless.

How was the development work split with co-creator Ian Bell?
We tried to split the tasks 50/50, but the way it worked in practice was we both worked on each other's code all the time. An awful lot of time was spent trying to do what we call byte-savings, which was a surprisingly rewarding way of trawling through, thinking "wow, I can rewrite those ten instructions into nine instructions and save two bytes" or "I could look at this, I can change that, I can do this here, and then we can save two bytes here as well".

Elite stripped away many familiar aspects of gaming such as time limits and lives. Why did you believe those mechanics were unnecessary for _Elite_?
Arguably *Elite* does have lives: it has one life. But it was a slightly bizarre feeling of "why three? Why not infinite?". I love games that mix it up a bit. Before *Elite*, the experience of publishers was very much about making games that were copies of arcade games and if you look at the catalogue of games immediately prior to *Elite*, there was very little experimentation. What I think we did was unlock publishers' willingness to experiment. Publishers had rejected *Elite* as a wonderful graphics demo and then came to think "we want some of that". So it's not that we inspired the developers – I think there were a lot of different experimental games that people were probably already making – but it was more



» [BBC Micro] Detailed descriptions of each planet gives you the impression of visiting exciting new worlds.

EIGHT GAMES ELITE INFLUENCED

The impact of Ian Bell and David Braben's game can be seen in a great many other franchises…



GRAND THEFT AUTO III

■ Considered to be *Elite*'s natural successor, the explorative, sandbox, mission-based play of *Grand Theft Auto*'s first 3D foray was testament to Sam and Dan Houser's immense appreciation of Ian and David's game.



WING COMMANDER: PRIVATEER

■ More linear than *Elite* but still with the free roaming ability, *Privateer* was a *Wing Commander* game, albeit one that involved cargo shipping, bounty collecting, combat and craft enhancements.



X: BEYOND THE FRONTIER

■ Egosoft's debut game in the X-universe felt like a simpler version of *Elite*, but there was an identical sense of adventure with base-to-base travel, lots of trading and ship upgrades.



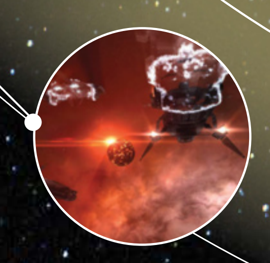
OOLITE

■ The name of this first-person, open-ended space trader stands for 'Object Oriented Elite'. It began as a fan effort which has grown in popularity and shows *Elite*'s influence on gamers as well as developers.



FREELANCER

■ As mercenary lawless adventurer Edison Trent foraged his way through the darkness of space, relationships with friendly or hostile factions played a big part, whether gamers assumed the role of pirate, trader or bounty hunter.



EVE ONLINE

■ *Eve*'s senior producer Nathan Richardson has never denied the influence *Elite* has had on his game and with a huge galaxy to explore, interplanetary trade, docking and shooting, the similarities are stark.



DEEP SPACE

■ Although marred by annoying controls, *Deep Space* pitted players in a STRIX fighter and plunged them into deep space, letting them earn credits for better weapons and energy boosts.

SPACE ROGUE

■ *Space Rogue* took *Elite* and added filled-in 3D graphics, realistic physics and RPG elements. Its successful blend was enough for *Zzap64!* to call it the greatest ever space game.



that we inspired the publishers to go with the developers' ideas. For at least two to three years we saw a lot of new genres come up that hadn't and probably wouldn't have been considered by a publisher before that.

Why did you decide to include trading in the gameplay?

We brainstormed a few different ways to make you care about your ship and we were both afraid that trading would be a bit boring: "What do you mean? You're buying at a certain price and selling a bit higher? Big deal, that doesn't sound exciting; that doesn't sound like a competitor to *Space Invaders* or to *Defender*". But we tried it out and thought, actually, it is quite compelling. You care so much more if you've got a cargo of gold that you're trying to get through if you're actually making a journey, rather, than just trying to survive two-and-a-half minutes.

This also allowed players to assume a role, didn't it?

Once you had the survival, it felt the score was money essentially and we contextualised all of that in terms of bounties so as soon as you had the idea of carrying cargo, all the other roles felt quite natural. "I'm attacking someone because I want their cargo" – so you're clearly a pirate. And having a bounty on your head also seemed logical. Then you could be a bounty-hunter without actually breaking the law. So the idea of law was added. It came together quite quickly.

Was there any frustration over the restrictions that the BBC Micro placed upon you?

It wasn't as bad as that. I had an Acorn Atom and I wanted to write this thing where you flew through an expanding sphere of star field, but I was horrified by how slowly it drew it in BASIC: you'd see the stars appear, undraw them and redraw them and think "oh, you've lost any persistence of vision". You had no feeling of 3D at all. I sat down to learn machine code and I thought there's got to be a game here because it's so lovely. It was an empty world, but you had such a sensation of motion and of 3D that it felt compelling and that's why I tried to work out how to draw 3D shapes. So with *Elite*, it was a bit back to front; it was very much driven by the technology, as in that came first and then it was "all right, it needs a spaceship, that would be fun to fly around and fight". And fighting in 3D actually felt great. It felt different. ▶



» [BBC Micro] Discovering exciting new locations has always been a massive draw of the original *Elite*.

> "You care so much more if you've got a cargo of gold you're trying to get through, rather than just trying to survive"

David Braben emphasises the importance of Elite's trading aspect

FRONTIER

If Elite was in the right place at the right time, the same could not really be said of Frontier. Work began on the game in 1988 but it would not be released until 1993. By that time, gaming had moved on rapidly. And yet, as with the debut game, Frontier showed great ambition. Not only were the 3D graphics in colour, it was the first game to feature procedurally generated star systems. It also had accurate physics. Best of all, with no end-game, it could go on forever. Destiny was truly in the hands of players, with gamers free to be whatever they wanted, from a miner to a mercenary to a trader or pirate.



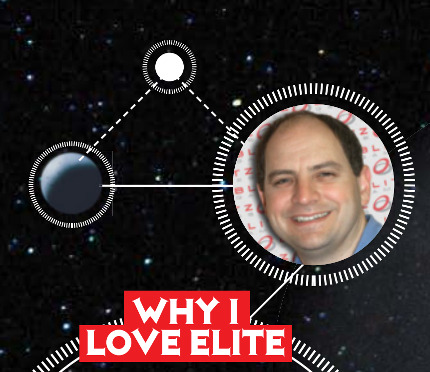
Was it very difficult to produce *Frontier* given the preconceptions of the first game?
I think so, especially when people's expectations had got very high. It's always a difficult balance.

***Frontier* provided more of the same in a sense. What would you say were the important things it brought to the table?**
For me, just the sheer scale of the galaxy and contextualising something real within the game environment was very exciting. And I think in terms of the richness of the game, *Frontier* did a lot more in terms of the way the missions worked; in terms of actually having some politics in the galaxy; the idea that you could be a bad guy in one place and a good guy in the other place at the same time. I thought that worked quite well in a game-type environment.

The game also saw a number of firsts. What stood out for you, looking back?
I think it was the first game to have curved surfaces and real-sized planets. It also pushed a sheer number of polygons. Certainly in 1988, when I first wrote it, the game was way ahead of its time.

You wrote *Frontier* alone, didn't you? Was it difficult?
Yes, the development work was mostly me and it took nearly five years, which was a little bit soul-destroying, especially seeing how quickly and how much the games industry changed from when I started to when I finished. Chris Sawyer, over the last period of that, did the conversions to PC.

So was it annoying when the game was criticised for its physics by people who believed it made it a little bit more boring?
I think *Frontier* was less well balanced but what was particularly frustrating for me was, just before the game was being released in that summer, Konami decided to stop making PC games and it sold its games business to a new company called GameTek. It had no real testing facilities and I was very unhappy at



WHY I LOVE ELITE

When Andrew and I first saw *Elite* in 1984 we were enthralled. This was way beyond anything we thought technically possible. When we started playing, we were sucked into this amazing world of piloting spaceships, dogfights and trafficking narcotics between different solar systems whilst avoiding pirates and police patrols. Its scope was awesome and totally engrossing. It was in a league of its own.

PHILIP OLIVER, DEVELOPER OF THE DIZZY SERIES

the transition. I think the game was a lot worse for it.

In what way?
With the first *Elite* and with *Elite: Dangerous* we had good time to get it feeling just right, whereas *Frontier: Elite II* and, even worse, *First Encounters* after it, were rushed. I think that was a tragedy because I think I could have got the physics right but it does take a lot longer than you think. People think you're only setting a few numbers but there's a lot of trial and error in exchanging the way the code works, to get it to have that feel that feels really good.

» [DOS] *Frontier* is packed with information, further adding to the immersion the series is known for.



» [DOS] Bulletin boards can offer all sorts of information, including buying and selling cargo.

Why did you decide to include communication with other pilots and starport control?
I liked the circular richness and symmetry of it. You could sign up to be an assassin, but you could also inadvertently sign up to be assassinated and get an assassin on your trail. It was often because you did something in the game where you crossed someone or you killed someone. The first message they would give you was, "I got a message to you from the name of the person in the previous mission, that will teach you to mess with them" or something so it was quite clear what it was relating to. I liked the fact you were just one of many people going about their business.

Some of the graphics could be a little jerky and at times it could make combat difficult. Did the problem surface as you were making the game?
When I was developing the game I happened to know from Commodore they were planning high-spec machines, so I designed it to be capable of taking advantage of the higher-end machines and yet be reasonable on the lower-end ones. I think part of the problem was a lot of people tended to ramp the detail right up and then complain that it was going slowly. Maybe I should have made it automatically sense the speed of the machine but, as it happened, most of those machines weren't out by the time the game shipped. So even though I had one at home, it would have been a high-risk strategy to go "all right, what speed CPU is this? I'm going to tweak the game for it". I wasn't certain how the graphics were going to change.

***Frontier* had a greater emphasis on missions rather than trading. Were you moving away from that trading at this stage?**
Not really; the trading was very much the same, but what I wanted it to be was more of a range of things you could do. I had expected *Frontier: Elite II* to be played by taking on a juicy mission and then thinking "I'm going there so what's the right trade good to carry at the same time?". I think it made the game richer as a result. We could always have deleted the missions or ignored them and then trading would have had the same importance as the original *Elite*, but I think gamers' expectations had moved on and if *Frontier: Elite II* was similar to *Elite* people would have said it's very dull, there's not enough to do.

WHY I LOVE ELITE

Elite was, for me, the definitive space trading game of the 8-bit and 16-bit eras – it took many years for anyone to come up with anything close. Hopefully *Elite Dangerous* can be the one to steal the crown.

ROBERT TROUGHTON,
DEVELOPER OF DESTRUCTION DERBY AND WIPEOUT

Classical music accompanied docking and combat. Did this hark back to your love of sci-fi film?
I always loved the juxtaposition of classic music and action. *Star Wars* did it, for example, but I think it was a real tribute to what Stanley Kubrick did in *2001: A Space Odyssey* with *The Blue Danube* and docking. People forget the original *Elite* didn't have *The Blue Danube*: that was added later. If you contextualise the sort of music that was in games at the time of the release of *Frontier: Elite II*, it was still very plunky plunky – interesting but it didn't work very well with a space game.

THE ENDLESS LOOP

Other videogame classics with no definitive ending



THE SIMS
■ In this open-ended 'life' game, your characters can get jobs, eat, sleep and make friends. But while there is no end to the possibilities ahead of you, there is no neat finish either.

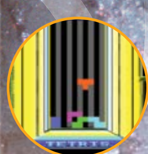
SIM CITY
■ Will Wright's open-ended city-building game has no definitive ending. Wright wanted players to experiment and learn from mistakes, so you can just keep going, building that metropolis.



SPORE
■ Dubbed a "truly endless universe of creative expression", *Spore* goes on and on, taking players from a tidepool phase of evolution through creature, tribal, city, civilisation and into space.

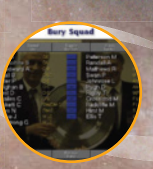


TETRIS
■ As long as you can continue to stop the blocks from reaching the top, it'll never end. You may even get Tetris Syndrome (when the game starts to pattern your thoughts).



ROLLERCOASTER TYCOON
■ Quite apart from the sequel's Mr Bones' Wild Ride being never-ending, *Rollercoaster Tycoon* lets you continue building, producing the best theme parks you possibly can.

CHAMPIONSHIP MANAGER
■ Season after season rolls by and you move from club to club seeking league and cup glory with your team. *Football Manager* is the current favourite, offering the same open-endedness.



FRONTIER: FIRST ENCOUNTERS

For the first time, Braben's latest game was a true team affair, but development was beset by problems. From a falling out between David Braben and Ian Bell to pressure from GameTek to release the game early, First Encounters was a bug-ridden disappointment for so many fans – and, it would seem, Braben himself – compounded by technical issues that were difficult to resolve. And yet the game's fractal landscapes looked stunning, the lack of loading screens made for a wonderful seamless experience and the alien-based missions were a joy.

***First Encounters* had a development team of ten. Was it a relief to have more hands on the pump?**
It was a relief but it also posed massive challenges because I hadn't really run a team before. I think one of the problems that was very apparent with *Elite* on the PC [conversion] that Chris Sawyer did, was that it didn't fit very well on the PC. The PC at that point was really a broad range of machines, using 286 and 386 Intel processors and one of the problems was the way they mapped their memory. The original game that Chris Sawyer had written used various pages of memory, because the PC was designed to have 640K of memory in pages and that was a real pig to use if you wanted the game to get any bigger; to make the screen a higher resolution was very difficult. And… the problem is the data set [for *First Encounters*] was also so much bigger than the original *Elite*.

Did the size cause you problems?
With *First Encounters* we were going to have a much bigger footprint, so we had to re-implement the code and a much flatter memory model to enable it to go much faster and enable us to support much higher resolutions and arbitrary resolutions. The game looked brilliant in the high resolutions, or what were high for the time, but we had to make a lot of changes. GameTek wanted to bring the release of the game forward and yet we had a lot of problems, the most fundamental being that the tools to develop [on] the PC hadn't settled down: you were writing it essentially as a 32-bit application and that was a real problem for

» [DOS] *Frontier* may have suffered from bugs, but its space combat is still massively enjoyable.



» [DOS] The sheer size of *Frontier: First Encounters* meant the team often struggled behind the scenes.



» [DOS] The amount of information is staggering. You can even discover a system's population.



Elite passed me by first time around because I was Sinclair rather than BBC. And, for some reason, I didn't play it when it was ported. I feel deeply ashamed.

CHARLES CECIL,
CREATOR OF BROKEN SWORD

WE HAVE A PEST PROBLEM

Frontier: First Encounter wasn't the only big game with bug issues…



FAIRLIGHT II: THE TRAIL OF DARKNESS

■ The Spectrum isometric arcade-adventure had an horrendous bug. Gamers could only get to the final door, which refused to open without the use of a POKE. The bug had not been fixed since the publisher decided to release the game in a beta state, very much against the wishes of programmer Bo Jangeborg.



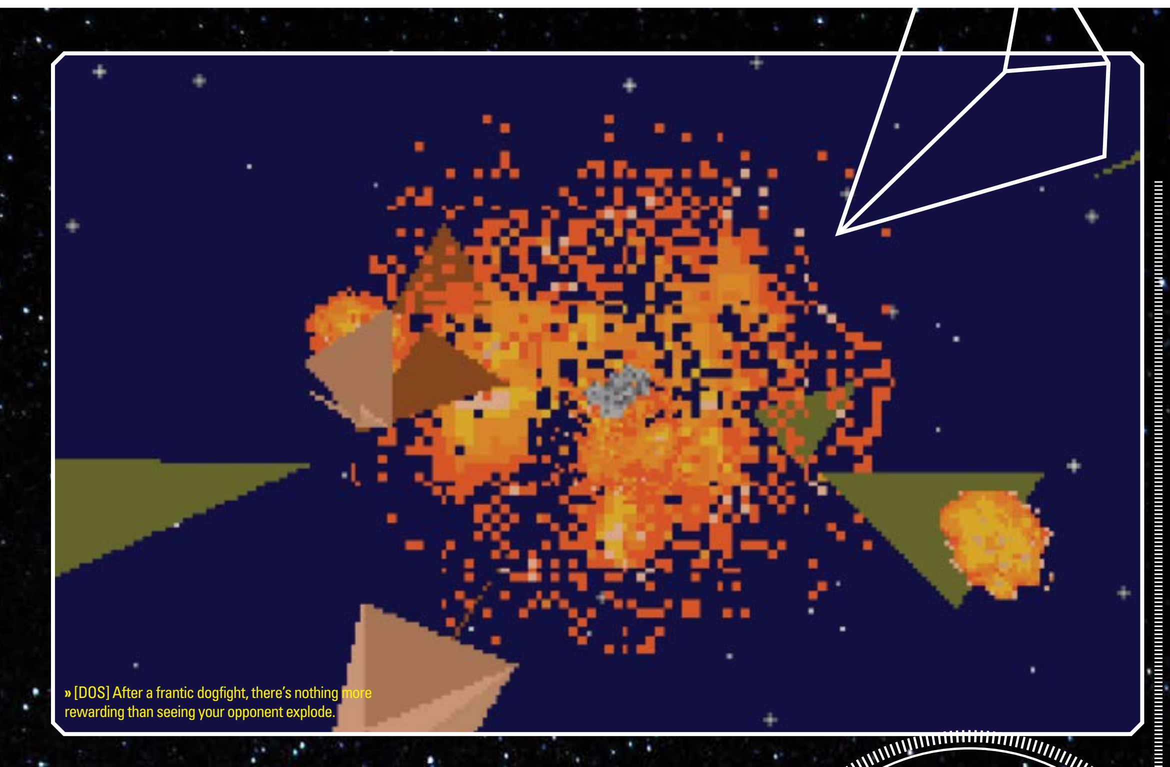
THE LEGEND OF ZELDA: OCARINA OF TIME

■ Nintendo dropped a few clangers in this 1998 N64 game. There are so many, entire websites are dedicated to listing them. One bug lets you defy gravity; another lets you lift the man in the archery gallery, enabling you to see how the artists neglected to draw him a pair of legs. It's even possible to bypass much of the game.



BUBBLE BOBBLE REVOLUTION

■ When this retro classic was given a fresh spin in 2005 on the Nintendo DS, the American version came with a terrible bug that omitted the boss at the end of level 30. It prevented players from progressing to level 31, rendering the final 70 (!) levels unplayable. Codemasters apologised and included *Rainbow Islands Revolution* in replacement copies as compensation.



» [DOS] After a frantic dogfight, there's nothing more rewarding than seeing your opponent explode.

development. It meant the game didn't get very much attention, sadly.

But the game did have some firsts…
That's right, and I think certainly from a technology point of view, the way some of the things we were doing with modelling the planets when you were a lot further ahead was something to be proud of. We had modelled how the atmospheres worked. And if you went to stars like Vega, they were almost like Smarties: their equatorial radius was so much bigger than their polar radius because they're rotating so fast. We created a bit of interest in the geography. We also had detail within the in-game newspapers. You could subscribe to up to five different papers, each of which was telling different stories from a different perspective.



» David is the first to admit that *Frontier: First Encounters* had a number of issues upon launch.

WHY I LOVE ELITE

With *Elite* I felt the awe of flying my own spaceship through a 3D universe… from moons to planets then enjoying the thrill of combat, all intermixed with the calming pleasure of shopping. The now-tense now-relaxing emotion sandwich of fighting and shopping remains the watchword in wisely designed player palate cleansing.

MARTIN HOLLIS,
DEVELOPER OF GOLDENEYE



The game was also the biggest of the three games up to that point, wasn't it?
Yes. The graphics were improved with shading and texture mapping but we had wanted to go further, which was the reason for rewriting the code, a different code base, so that we could be a lot more ambitious.

Was anything left out?
We had a whole sequence of very interesting linked missions and I think some hackers have actually looked at some of the code and seen that there's a whole set of mission threads to do with the Thargoids that were closed off. I think that was a real shame. But that's what we had to do, because GameTek was absolutely insistent that the game shifted before the end of its financial year. I think bad things would have happened had it not, but that was so much the wrong thing to do and I learned so much from it.

Is this why the game was quite buggy then?
Oh the game was horrendous. It wasn't ready. The first release actually had in capital letters across the front 'Beta Release: Not for Public Release' or words to that effect. It was pretty shocking.

So this was quite apart from anything that was happening between yourselves and Ian Bell?
Yes, it was, although I think that sort of rolled into it at the time. I'd not worked with Ian for a long time, but he got a percentage off *Frontier* and not off the later sequels and it caused a problem. We fell out and it's a shame. It's always a shame when that sort of thing happens.



POKÉMON RED/BLUE

■ A glitched Pokémon species dubbed MissingNo (short for missing number) wreaked havoc in the original game. Catching it meant the game tried to access data that just didn't exist and this would allow the replication of the sixth item in the player's item bag. But it could also crash the game, lead to graphical glitches and corrupt the save file.



JET SET WILLY

■ The infamous Attic Bug involved the player entering a room called The Attic, whereupon the game would corrupt, removing enemies from The Chapel and making death traps of others. Programmer Matthew Smiths said the issue was to do with buffer overflow, but Software Projects at the time insisted the bugs were intentional. For a spell anyway: it later issued a patch.

SPACE INVADERS

■ When Tomohiro Nishikado created *Space Invaders*, the idea was that all of the aliens would stay at the same speed. But he found that the more enemies that were killed, the faster the remaining aliens would move. Rather than attempt to fix this bug – caused by freeing up the processor – Nishikado left it in and it turned into a popular feature.





» [DOS] The graphics were extremely impressive for the time, ensuring you always wanted to explore.



ELITE DANGEROUS

3 decades on, the time is right for a return and what a triumph it is proving to be. Elite's status as one of gaming's most influential titles helped to persuade 25,681 Kickstarter backers to pledge a whopping £1,578,316 to fund the third sequel, Elite: Dangerous. It may have only just been released but it's already proving popular with fans, having started with a single star system and with 400 billion set firmly in its sights. There's asteroid mining, the ability to own multiple ships and full use of online capabilities. Needless to say, David Braben is still having a lot of fun.



» Kickstarter has allowed David to constantly update backers about the progress of *Elite: Dangerous*.

So now *Elite* is back with *Elite: Dangerous*, exactly 30 years on. You've said this game is intricate and will take time to learn and appreciate. Is this a game for the hardcore gamer?
This is a game again for, dare I say it, me. It's for people like me. A lot of these things [are about] courage of convictions: what sort of game would I like to play and are there other people out there like me? And I don't mean my age. We've shown [it] to people going all the way down to teenagers and all the way up to my age and older. What we've found is that people want a good game and they think this is a good game.

Did you get an indication of the profile of players from the Kickstarter campaign?
I think a lot of people following the game were older players or older people who remembered the game like me. But certainly when we went to America at GDC and then again for E3, we were seeing more players coming to the game who hadn't heard of either of the originals whereas previously people were saying "I loved *Frontier*" or "I loved *Elite*" or "I loved both". When we were actually getting more players coming in who didn't know the game, that was very heartening.

***Elite* has always been more popular in the UK and Europe, hasn't it?**
Yes. I think the original game got a lot less coverage in the US and they didn't necessarily go well on the platforms that were available in the US. The original *Elite* took quite a while to move to the Apple II, which was a key platform in the US, whereas the BBC Micro hardly had any footprint in the US.

Why did you decide to go down the crowdfunding route?
I wanted very much to know this game would work and I think without the huge vote of confidence from the crowdfunding people we wouldn't have been able to do it, simple as that. I'd get lots of emails prior to the crowdfunding, saying "you must do a new *Elite*" and all



» [PC] Some of the included planets have been named by Kickstarter backers. Maybe you'll find yours…



WHY I LOVE ELITE

Pursuit of 'Elite' status meant happily blasting anyone with the temerity to interfere when jump-driving towards my latest destination. Pirates, fellow smugglers, Thargoids, cops and civilians – all just notches on the laser cannons. And all in vain, since despite countless hours on four platforms I never persevered beyond 'Deadly'…

IAN MALCOLM,
LEAD DESIGNER AT MELBOURNE HOUSE

of this sort of thing, and it's difficult to know whether that's 100 or so very vocal people or whether they're actually representative of a much, much bigger silent majority.

You've said that you'd wanted to create this particular game for quite some time, but why didn't you?
It's an ambitious project, which means it's quite expensive to make and it needs quite a lot of people. I think to be able to do that you either need the backing of resources from a publisher, because one of the problems [is] getting it to market and getting visibility of the game, or you try something like Kickstarter.

Have you learned a lot in the time between the third *Elite* instalment and this game?
Yes. One of the things that we did quite early on, in 2008, was release a game called *Lost Winds*, which was really good for us because it was the first time we'd tested out our own processes. It's all very well to say in the pub, "yes, we could do that, how hard could it be? We could do it easily," but it's much harder and braver to actually try and do it. So with *Lost Winds*, we promoted the game ourselves, spoke directly to magazines and websites, and we sold the game digitally through the Nintendo Store initially. We managed milestones internally and all that sort of thing, and it worked really well. It was less of an overhead than working with a publisher. So we used that experience, we did another game, *Coaster Crazy*, which we learnt a lot from again and that's built up internally the knowledge that we feel we need to go much bigger.

» [PC] Graphically *Elite: Dangerous* is amazing. Time for a new PC!

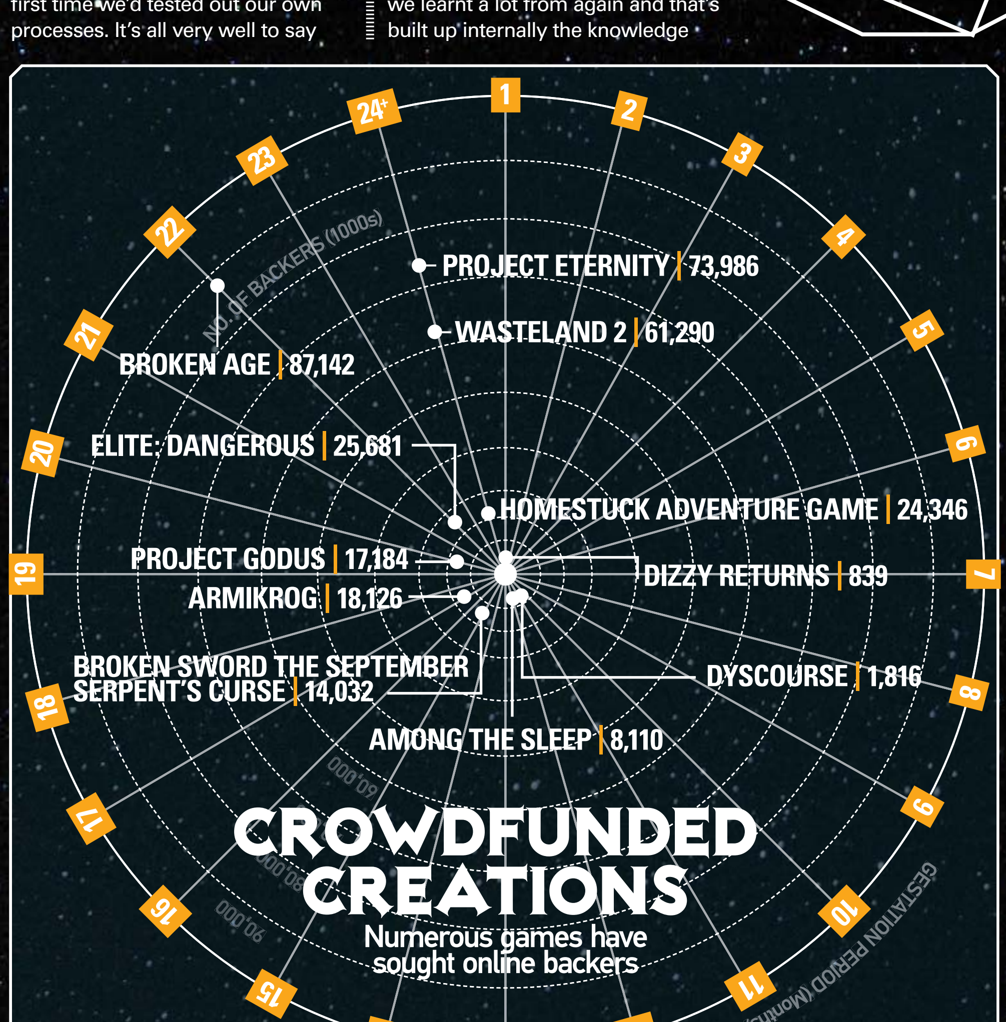
WHY I LOVE ELITE

Elite was the first game I got really addicted to [and I] kept playing… into the early hours. I'd get to school the next day, tired [and] whenever I shut my eyes I'd see the crosshair and police ships swarming around me, jolting me awake!

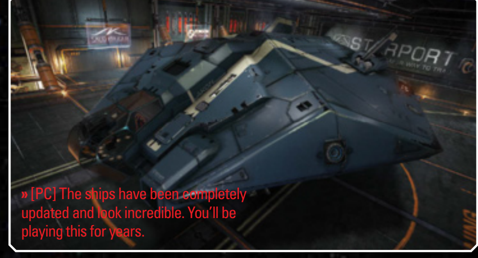
STE PICKFORD

So the stars have lined up for you with *Elite: Dangerous*?
I think the stars lined up for us in a different way, in the sense that it's now practical to sell a game the size of *Elite: Dangerous* online, whereas even back in 2008 I think it would have been a big ask, for a download of a gigabyte or so, because the network infrastructure wasn't there, whereas now it is. So I think what's happened is the world has changed to enable this.

What elements are in *Dangerous* that you wish you'd put in before?
The main thing [is] the fact that you are online – you are playing both with and against other players, other humans – really adds such a lot to it. And I think there are a lot of knock-on effects of that. We've seen a lot of YouTube videos of quite amazing operations and people doing things that I hadn't expected. Some of the smuggling videos I've seen are excellent. Some of the things that people have discovered in the game are also great. It shows such a love for the game and some of the time-lapse photography people have been taking are brilliant. *



> "It's an ambitious project, which means it's quite expensive to make"
> David explains why the new Elite game has taken so long


» [PC] The ships have been completely updated and look incredible. You'll be playing this for years.


» [Xbox One] *Elite: Dangerous* plays surprisingly well on Microsoft's console.

Retro Gamer READERS' CHOICE

THE GREATEST NES GAMES

Nintendo's 8-bit machine established the company as the dominant force in the international console market, and it couldn't have done so without classic software. We count down its top 25 games, as voted for by Retro Gamer readers…

Original Nintendo Seal of Quality





> "One of the first games that I tested at Rare. Tricky controls but mastery bought a huge sense of accomplishment. I vividly remember tonguing the giant foot on the moon to win."
> Gregg Mayles, Rare

SNAKE RATTLE 'N' ROLL

■ **DEVELOPER:** Rare ■ **YEAR:** 1990 ■ **GENRE:** Platform

25 **Born from an** experimental drive to create a small NES cartridge, *Snake Rattle 'N' Roll* sees players chasing down and eating Nibbley Pibbleys in order to grow their snake, in order to tip the level's scales and open the door to the next stage. Rare's isometric action game is a tricky one to categorise – but that's not a bad thing, as it's a unique experience. Be sure to try the simultaneous two-player mode, too!

BUCKY O'HARE

■ **DEVELOPER:** Konami
■ **YEAR:** 1992 ■ **GENRE:** Platform

24 **The spotlight might** not have shone on *Bucky O'Hare* for long, but Konami ensured that he got a very good licensed platform game while it did. It's similar to *Mega Man* in structure, with Bucky seeking to rescue his crew members from the Toad Empire across a variety of planets, which can be tackled in any order. Arriving late in the life of the NES, *Bucky O'Hare* provided some of the most attractive visuals on the system alongside some pretty strong gameplay.

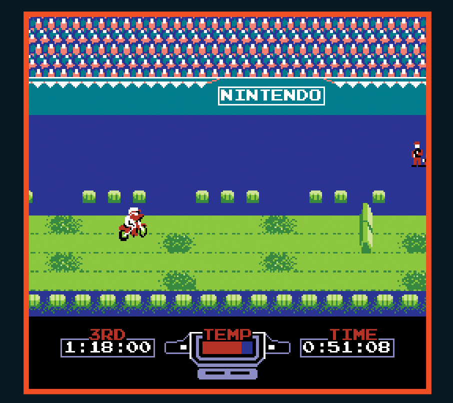


CHIP 'N DALE: RESCUE RANGERS

■ **DEVELOPER:** Capcom ■ **YEAR:** 1990
■ **GENRE:** Platform

23 **While Capcom is** best known for *Street Fighter* and *Resident Evil* today, the NES era saw the company make a name for itself based on a range of high quality platform games. The gameplay is good here, but it's striking how few cartoon licences capture the look and feel of their source material as well as *Chip 'N Dale*, the game boasts detailed sprites and colourful backgrounds which emphasise the size of our heroes.





EXCITEBIKE

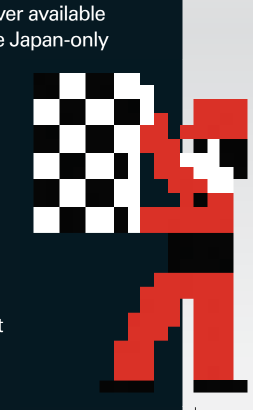
■ **DEVELOPER:** Nintendo R&D1
■ **YEAR:** 1984 ■ **GENRE:** Racing

22 **One of the** interesting things about the NES is that the machine had a very long shelf life, with over a decade between its Japanese release as the Famicom and the final officially licensed games in the mid-Nineties. With so much time for developers to extract the best performance from the machine and all of the additional chips utilised over the years, it's easy to expect that the console's early releases would be overshadowed by the more complex games – but that's not the case, as games like *Excitebike* show.

Excitebike is a simple game. Either alone or with computer controlled riders, your goal is to beat target times on each course in order to progress. This is complicated by obstacles including grass, mud patches, barriers, and the ever-present ramps, which require players to correct their landing angle as they fall – a simple challenge, but one which remains challenging to consistently perform over a long period. Falling off your bike will cost you valuable time, as will overheating the bike by overusing the high speed button. As the game goes on, the courses become more complex, with high angle ramps and fewer clear stretches on the track.

> "Typical Nintendo, simple as anything, but hard to master, and it is so much fun."
> adippm82

The main thing that set *Excitebike* apart from other NES games was the inclusion of a level editor. While the option to save and load these creations was never available to the West as it required the Japan-only Famicom Data Recorder add-on, the mode extended the game's life considerably once they'd exhausted all of the pre-designed stages. While *Excitebike* might not have been the flashiest game in many players' NES collections, the combination of this mode and the compelling gameplay meant that it was often revisited.





"Great challenge and once you get used to it, a great platformer. No wonder we begged for a sequel for 25 years…"
ALK

KID ICARUS

■ **DEVELOPER:** Nintendo R&D1 ■ **YEAR:** 1986 ■ **GENRE:** Platform

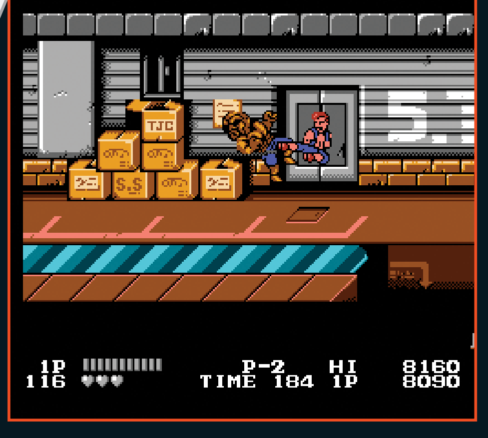
21 **Right from the** start, *Kid Icarus* is a game that just *feels* different from its platforming contemporaries. In other games you'll typically traverse a stage from left to right, but *Kid Icarus* starts you off by sending you on a skyward journey, with a playfield that wraps horizontally across the screen – when Pit walks off the right edge, he'll appear on the left. It's a feeling of difference that permeates the game, as while the game offers items and upgrades, it never crosses over into RPG territory. For many years this was one of Nintendo's forgotten properties, with only a Game Boy sequel to continue its lineage, until Pit's adventures were continued in the shooter *Kid Icarus: Uprising* on the Nintendo 3DS.

RIVER CITY RANSOM / STREET GANGS

■ **DEVELOPER:** Technos
■ **YEAR:** 1989 ■ **GENRE:** Beat-'em-up

20 **Following arcade success** with games such as *Renegade* and *Double Dragon*, beat-'em-up innovators Technos returned with a NES title that took the genre in a more console-focused direction. As well as beating up all manner of weirdly-named gangs like The Squids and The Generic Dudes, players can learn moves, develop stats, and even buy items. *River City Ransom* wasn't a huge success when it arrived in North America and it didn't fare a great deal better when it was released in Europe as *Street Gangs*, but the game's reputation has grown, thanks to a loyal cult following, earning its place in your top 25.





DOUBLE DRAGON

■ **DEVELOPER:** Technos ■ **YEAR:** 1988 ■ **GENRE:** Beat-'em-up

19 **The hit beat-'em-up** came to the NES, but rescuing Marian from the clutches of Machine Gun Willy wasn't quite the same proposition as in the arcades. For a start, the simultaneous two-player mode is nowhere to be found, and enemy numbers are limited. Further, stages received some interesting redesigns and all but the most basic fighting moves were gained through an experience system. Despite these changes, *Double Dragon* remained a compelling and challenging beat-'em-up that retained enough of the arcade essence to be truly worthy of the name. Multiplayer fans can also check out Mode B, which features larger character sprites in one-on-one battles and it even allows players to control enemy characters – an interesting novelty, to say the least.



CASTLEVANIA III: DRACULA'S CURSE

■ **DEVELOPER:** Konami ■ **YEAR:** 1989 ■ **GENRE:** Platform

18 **We must admit** to being surprised, here – we were expecting this brilliant platformer to appear much higher in your ranking. The last of the major *Castlevania* games to appear on the NES was a prequel to the events of the first game, starring Simon Belmont's ancestor, Trevor Belmont, as he attempted to defeat Europe's most notorious vampire.

The game left the RPG elements of *Castlevania II: Simon's Quest* and returned to the platform action template of the original game. However, new improvements included a non-linear level structure, additional playable characters with their own unique abilities (including *Symphony Of The Night* star, Alucard) and a more challenging second quest for players that have finished the game. In part thanks to the use of the expensive MMC5 chip, *Castlevania III* boasts some of the most impressive visuals on the system, and the action is accompanied by an excellent soundtrack.

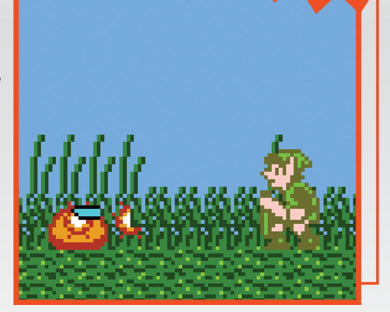
ZELDA II: THE ADVENTURE OF LINK

■ **DEVELOPER:** Nintendo R&D4 ■ **YEAR:** 1987 ■ **GENRE:** Action-RPG

17 **Despite huge sales** of over 4 million copies, the first *Zelda* sequel hasn't always received a huge amount of love over the years. However, lots of you hold the opinion that it is unfairly maligned and we're inclined to agree. *Link's Adventure* retained the first game's top-down viewpoint for overworld exploration, but the meat of the gameplay was found in side-scrolling combat sections. Additional RPG elements were also introduced in *Zelda II*, including experience levels, a magic system and more extensive interaction with the non-player characters you found in towns.

Players have come down hard on *Zelda II* for departing so heavily from the gameplay of the original title, and future 2D *Zelda* games stuck much more closely to the top-down action of the first game. However, it highlights Nintendo's willingness to experiment as a game developer – a commendable quality, even if it doesn't always guarantee popular results.

"I know people think it's the black sheep of the *Zelda* series, but it should be given a chance 'cos it's a great game."
Spock10M



FAXANADU

■ **DEVELOPER:** Hudson Soft ■ **YEAR:** 1987 ■ **GENRE:** Action-RPG

16 **We hear your** cries, dear readers! *Faxanadu* is a game that you've highlighted as being something of a forgotten gem, and its appearance in the top 25 is testament to your strength of feeling on this matter. The player is cast as a wanderer who returns to his home town only to find it in a state of severe decline, and being attacked by dwarves. The high fantasy setting is aided by the fact that *Faxanadu* doesn't utilise the cartoonish look that many NES games adopted, giving it a more mature impression.

The game itself is a side-scrolling action-RPG of the kind that will be familiar to players of games such as *Zelda II* and *Wonder Boy III: The Dragon's Trap*. *Faxanadu* includes many of the key trappings of the RPG genre, with a protagonist whose capabilities grow with experience, a wide range of non-player characters to chat to, and full inventory options, but combat and exploration are handled in a traditional platform game fashion. Give it a go if you haven't yet played it – with prices hovering around £10, it won't break the bank and you wont regret it.



DUCKTALES

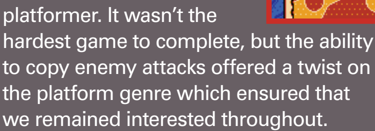
DEVELOPER: Capcom
YEAR: 1989 **GENRE:** Platform



15 **Capcom offered an** excellent choice of licensed Disney platformers on the NES, and you guys liked *DuckTales* the most. We love Scrooge McDuck hopping around on his cane, and the structure which requires you to obtain items in various stages to progress is very cool.

KIRBY'S ADVENTURE

DEVELOPER: HAL Laboratory
YEAR: 1993 **GENRE:** Platform



14 **Players that kept** their NES hardware deep into the 16-bit era were rewarded with this incredible platformer. It wasn't the hardest game to complete, but the ability to copy enemy attacks offered a twist on the platform genre which ensured that we remained interested throughout.

SUPER MARIO BROS. 2

DEVELOPER: Nintendo R&D4
YEAR: 1988 **GENRE:** Platform



13 **While this *Mario*** game wasn't always a *Mario* game and feels slightly different as a result of that, the fact remains that it's still an excellently designed platformer. Being able to control Peach and Toad was very cool, and Luigi became distinct from his brother with his floaty jumps.

RC PRO-AM

DEVELOPER: Rare
YEAR: 1987 **GENRE:** Racing



12 **This racer** is one of Rare's earliest hits on a Nintendo platform, and features radio-controlled cars battling to take victory across 24 tracks. We mean it when we say battling, too – these little cars pack some firepower, with bombs and missiles available to take out rivals.

MIKE TYSON'S PUNCH-OUT!!

DEVELOPER: Nintendo R&D3
YEAR: 1987 **GENRE:** Fighting



11 **Taking the action** of Nintendo's arcade boxing series and taking it to the home consoles, *Punch-Out!!* knocked players out with memorable characters and compelling mechanics. Best of all, Tyson himself put in an appearance.



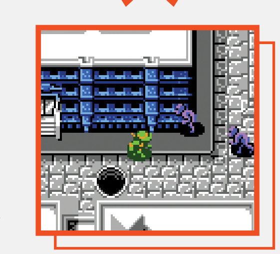
TEENAGE MUTANT NINJA TURTLES

DEVELOPER: Konami **YEAR:** 1989 **GENRE:** Platform

"The game that made me want a NES. I remember recording the ad for the Turtles box set and watching it every day." RodimusPrime

10 **If there was** one thing that kids couldn't get enough of in the late Eighties and early Nineties, it was this quartet of pizza-loving crime fighters, and Konami sensibly snapped up the videogame rights early. The result was a brilliant, strong platformer, although one which had the incredible ability to frustrate players – in particular, the infamous underwater bomb disarming stage is one of the most frustrating levels in any videogame ever.

While the game was popular internationally, UK-based Nintendo fans have a particular fondness for the game as its placement in a NES bundle over Christmas 1990 meant that it was the first game many players owned. The presence of the Turtles drove up desire for the NES, and even helped it briefly overtake Master System sales in the UK.



DUCK HUNT

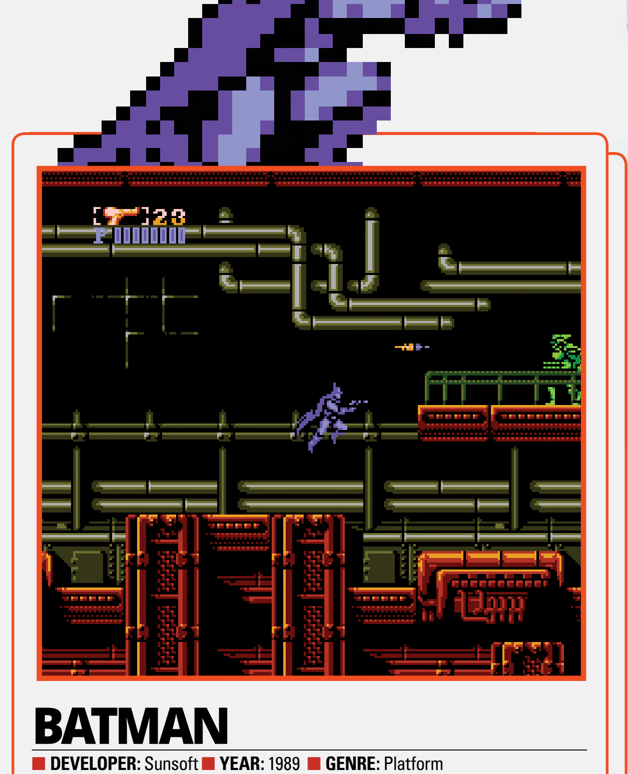
DEVELOPER: Nintendo R&D1
YEAR: 1984 **GENRE:** Lightgun Shoot-'em-up

9 **Packed in with** all but the basic NES console bundles, *Duck Hunt* was a cornerstone of many gamers' NES experiences and was the only Zapper title to make your top 25 list. What makes *Duck Hunt* so memorable is its simple yet captivating gameplay – one or two ducks fly out and you need to shoot them down, ideally with as few misses as possible. There's also the clay pigeon game in Mode C, in which discs fly into the distance.

But let's be honest, it's all about bagging birds – and of course that pesky dog. He certainly adds character, proudly displaying your hits when you make them and mocking you when you fail to do so. Our canine companion's sniggering definitely triggers some of our more violent urges, but try as we might, we can never take out our frustrations on him by just blasting him away. That is true sadness, there.



"This is a great little game, introducing many a fresh keen-eyed marksman to the joys of the lightgun." Jim Bagley, SpecialFX

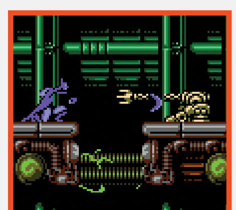


BATMAN

■ **DEVELOPER:** Sunsoft ■ **YEAR:** 1989 ■ **GENRE:** Platform

8 **The caped crusader** has had a number of videogame incarnations over the years, but few have accompanied a peak interest in Batman like this one, which followed in the wake of the 1989 film starring Michael Keaton. The videogame was themed after the film and took the form of a platformer which allowed you to fight the likes of Killer Moth, Firebug and, of course, the Joker as you sought to clean up Gotham. The game has since achieved recognition on its own terms, with one company even releasing an action figure in NES colours.

While Batman's weaponry was present, one of the coolest features in *Batman* was actually the ability to leap off walls with a secondary jump. Rarely seen at the time, this feature enabled our hero to ascend through narrow vertical passages and save himself from otherwise fatal situations.



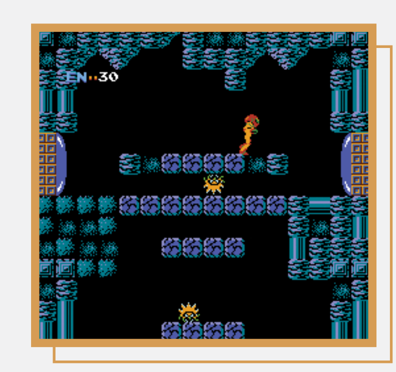


METROID

■ **DEVELOPER:** Nintendo ■ **YEAR:** 1986 ■ **GENRE:** Platform

7 **At its heart,** *Metroid* is a simple game – a platform-shooter in which Samus Aran seeks to recapture the dangerous Metroid organisms, set on the planet Zebes. However, it introduced many players to a new style of platform game, in which exploration was key and new abilities enabled access to additional areas. This template is so closely associated with *Metroid* that it co-named the Metroidvania subgenre, along with the *Castlevania* series which later adopted this style.

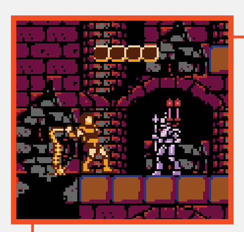
While the action is all well and good, *Metroid*'s best bits are the memorable twists which stick in the memory long after you've beaten the game. The revelation that Samus Aran is a female protagonist might have lost its shock factor, but its importance remains. As for the other twist – well, don't put your pad down after Mother Brain has been defeated…



CASTLEVANIA

■ **DEVELOPER:** Konami ■ **YEAR:** 1986 ■ **GENRE:** Platform

6 **Konami's developers rarely** seemed more at home than when they were working on the NES, coming up with hits such as *Castlevania*. Borrowing some thematic cues from Capcom's *Ghosts 'n Goblins*, the game casts you as Simon Belmont, a vampire hunter out to kill Dracula. Each stage pits you against all manner of supernatural villains, but is well-designed to fit the crumbling castle theme and offers strong level design. The game is visually strong and offers memorable tunes, while tight control enables precise platforming and offers the use of secondary weapons such as axes and crucifixes, rounding off an excellent package.



"Me and my brother would play it and we'd be like 'who's going to be Arnie, who's going to be Stallone?'"

Claudio Sanchez, Coheed and Cambria

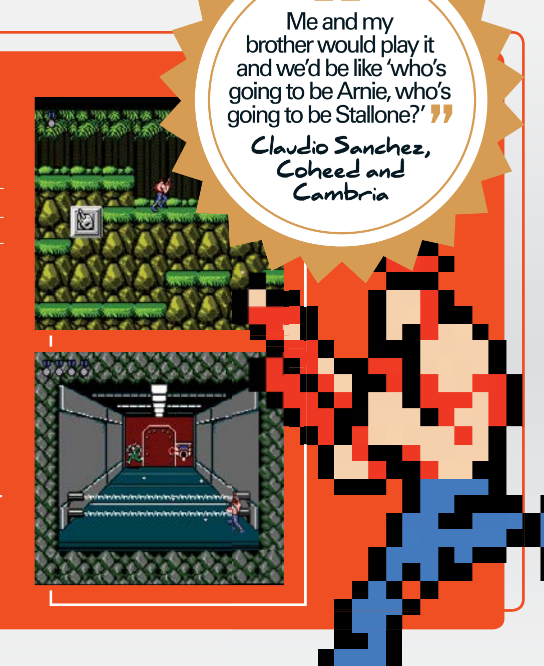
CONTRA / PROBOTECTOR

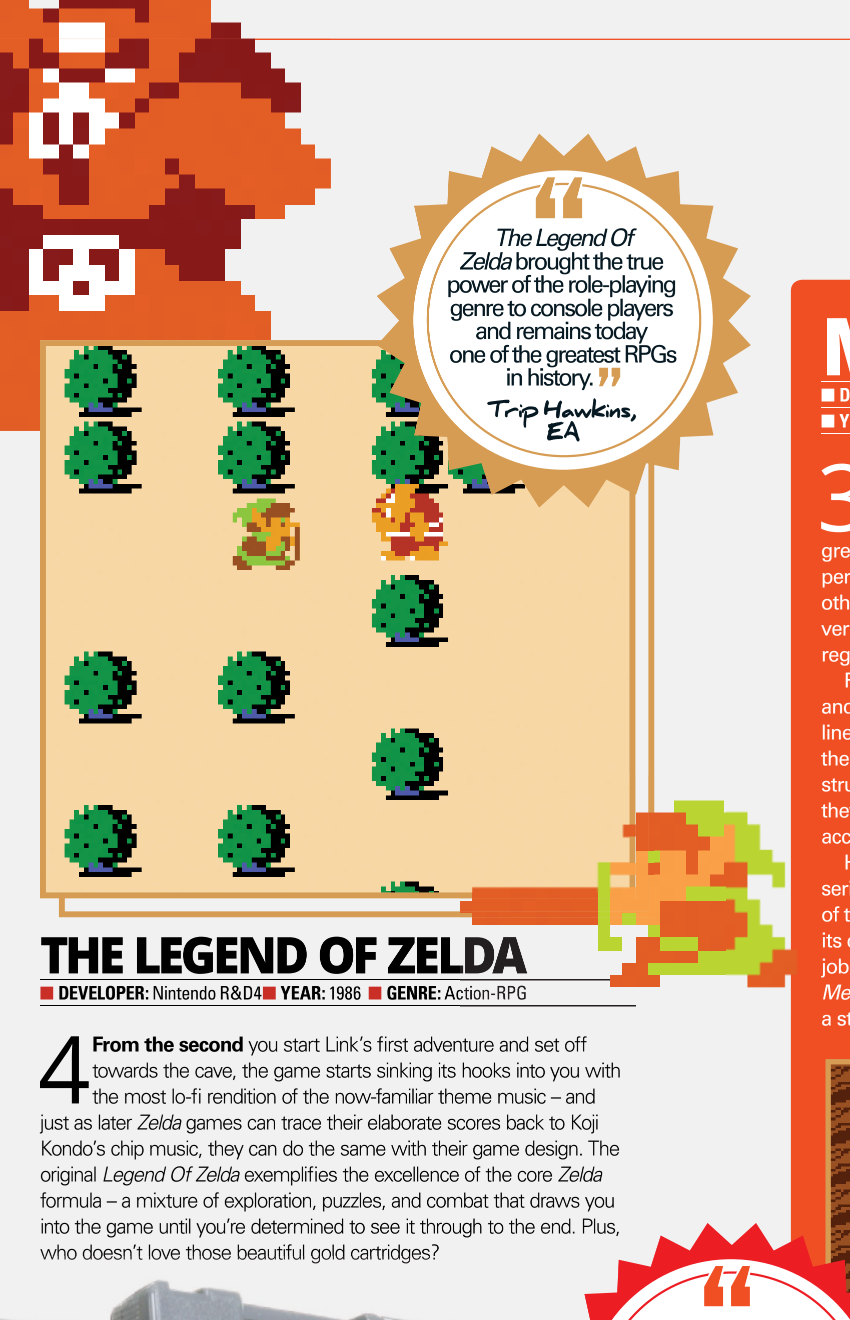
■ **DEVELOPER:** KONAMI
■ **YEAR:** 1988 ■ **GENRE:** Run-and-gun

5 **This classic run-and-gun** is your favourite arcade conversion for the NES. *Contra* is a great example of Konami at the height of its powers. While the NES version of *Contra* makes a few changes from the coin-op, the game still offers the key things that make it so appealing: frantic action and a very stiff challenge. Though the game was renamed for Europe and censored in order to circumvent German censorship laws, the gameplay shone through.

"The controls and gameplay are spot on. Just the right side of difficult and never unfair."

theantmeister





> "*The Legend Of Zelda* brought the true power of the role-playing genre to console players and remains today one of the greatest RPGs in history."
> Trip Hawkins, EA

THE LEGEND OF ZELDA

■ **DEVELOPER:** Nintendo R&D4 ■ **YEAR:** 1986 ■ **GENRE:** Action-RPG

4 **From the second** you start Link's first adventure and set off towards the cave, the game starts sinking its hooks into you with the most lo-fi rendition of the now-familiar theme music – and just as later *Zelda* games can trace their elaborate scores back to Koji Kondo's chip music, they can do the same with their game design. The original *Legend Of Zelda* exemplifies the excellence of the core *Zelda* formula – a mixture of exploration, puzzles, and combat that draws you into the game until you're determined to see it through to the end. Plus, who doesn't love those beautiful gold cartridges?

> "Nigh on perfect controls, great weaponry and a very fair difficulty make this the stand out title for the NES."
> ArchaicKoala

MEGA MAN 2



■ **DEVELOPER:** Capcom
■ **YEAR:** 1988 ■ **GENRE:** Platform

3 **After almost three** decades of *Mega Man* games, it's easy to forget that the first one was not a tremendous financial success for Capcom. As a result, the company didn't give the green light for a sequel immediately – the development team was permitted to work on *Mega Man 2*, but was also required to work on other projects simultaneously. As a result, it was common for staff to work very long hours making the game, often staying in the office well past their regular working hours. *Mega Man 2* was a real labour of love.

For teams developing sequels, it can be tricky to work out what is broken and in need of fixing, and what is better left alone. Capcom trod that fine line carefully and reaped the rewards. Elements that were preserved from the original game include its platform-shooter set up and its non-linear structure, in which a player chooses a stage based on which Robot Master they'd like to take down. As before, once you've downed a boss you'll gain access to their weapon, some of which are more effective than others.

However, it's the improvements which make *Mega Man 2* the best of its series. Not only is it superior to its predecessor, the brutal difficulty level of the first game has been toned down. The game is still no pushover, but its challenge is more likely to cause fun than frustration – which is a good job since the game has eight Robot Masters, up from six in the first game. *Mega Man 2* went on to sales success and established the blue bomber as a star, a richly deserved outcome for one of the best NES games ever.

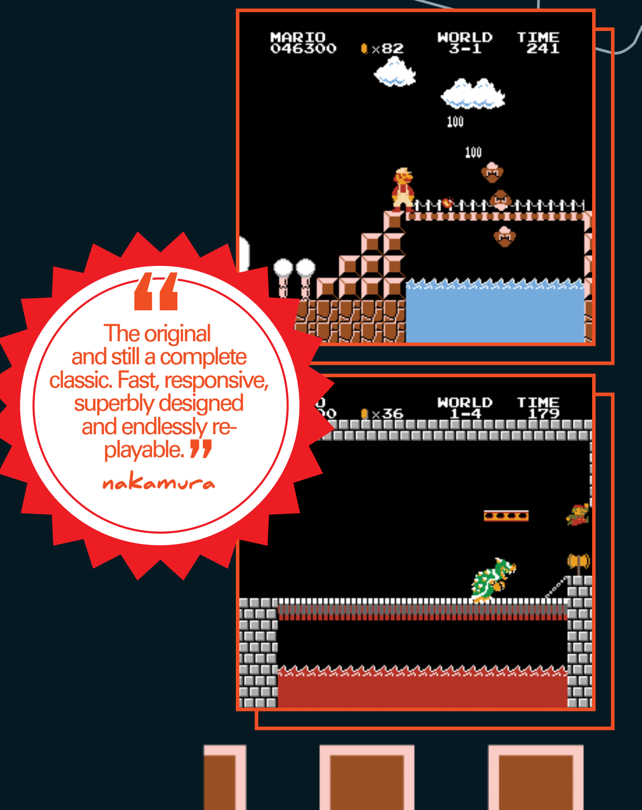


> "Anytime I'm feeling frustrated or depressed, or I'm lamenting the industry, all I have to do is load up *Mega Man 2*. I revert to being eight again, and I can't help but be happy, and smile."
> Jaime Griesemer, ex-Bungie, Halo 3 lead designer



> "The godfather of platform games – the game that spawned one million imitations. Nintendo have been the most influential game developer of all time setting so many trends and such a high quality bar that we can easily forget the magnitude of their importance."
>
> Jon Hare, Sensible Software





> "The original and still a complete classic. Fast, responsive, superbly designed and endlessly re-playable."
>
> nakamura

SUPER MARIO BROS.

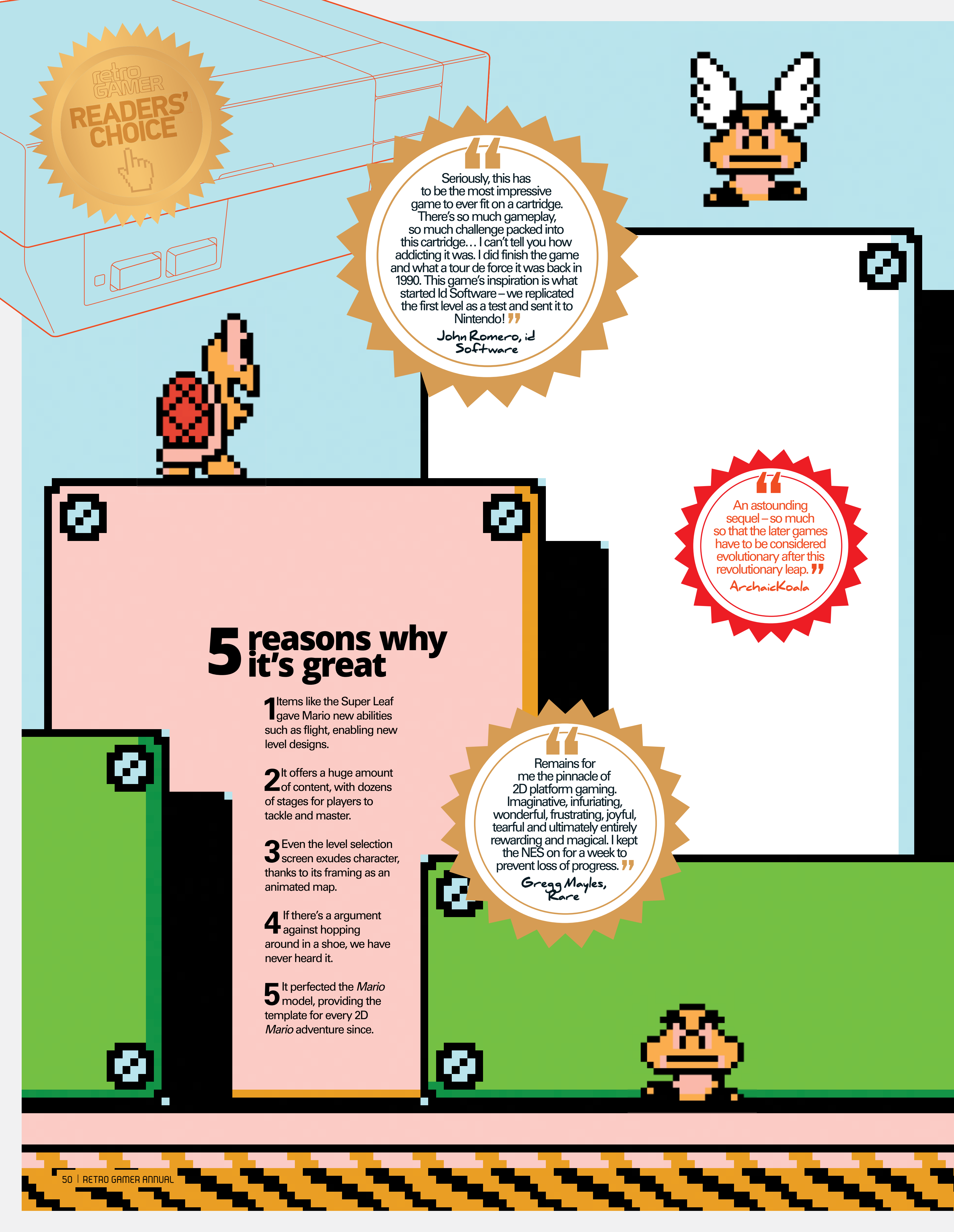
■ **DEVELOPER:** Nintendo R&D4 ■ **YEAR:** 1985 ■ **GENRE:** Platform

2 **We miss the** days of pack-in games. During the Eighties and Nineties, console manufacturers often seemed to make a special effort to ensure that every buyer would have at least one excellent game to play – and *Super Mario Bros.* was most definitely an excellent game. While Mario had made his debut in *Donkey Kong* and become a headline name in *Mario Bros.*, it wasn't until *Super Mario Bros.* that he became a real star. Whether it was alone or combined with *Duck Hunt*, *Super Mario Bros.*' long-term status as a pack-in game meant that over 40 million gamers would get to experience this star-making game.

One of the key secrets of *Super Mario Bros.*' success is that the game explains itself very well through level design alone. The initial screens are a masterpiece of game design, as you're wordlessly taught the function of enemies, mushrooms and question blocks. As the first game that many players experienced on a new system – and as the NES introduced so many players to videogames – this ease of learning was absolutely vital.

The learning curve also disguised that *Super Mario Bros.* was a complex game for its time, splicing many disparate elements of game design. We'd seen sections that allowed you to skip ahead in *Pitfall!*, power-ups in *Pac-Man* and bosses in *Phoenix*, but all of these combined in *Super Mario Bros.* to make an adventure of a kind never seen before. The variety was aided by the secrets that the game offered, from hidden items to warp zones, and difficulty was perfectly pitched to ensure while *Super Mario Bros.* posed enough challenge to last, but was no ordeal. Games that complement consoles this well are exceedingly rare.

> "To me *Super Mario Bros.* original for NES is the definitive *Super Mario* platformer. Not only did it set a new benchmark for platformers, it also had an awesome soundtrack."
>
> Jim Bagley, Special FX



"Seriously, this has to be the most impressive game to ever fit on a cartridge. There's so much gameplay, so much challenge packed into this cartridge… I can't tell you how addicting it was. I did finish the game and what a tour de force it was back in 1990. This game's inspiration is what started Id Software – we replicated the first level as a test and sent it to Nintendo!"

John Romero, id Software

"An astounding sequel – so much so that the later games have to be considered evolutionary after this revolutionary leap."

ArchaicKoala

5 reasons why it's great

1 Items like the Super Leaf gave Mario new abilities such as flight, enabling new level designs.

2 It offers a huge amount of content, with dozens of stages for players to tackle and master.

3 Even the level selection screen exudes character, thanks to its framing as an animated map.

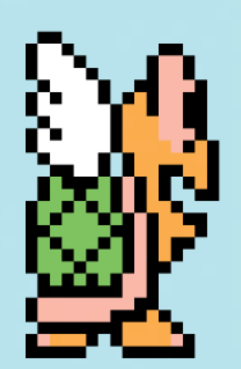
4 If there's a argument against hopping around in a shoe, we have never heard it.

5 It perfected the *Mario* model, providing the template for every 2D *Mario* adventure since.

"Remains for me the pinnacle of 2D platform gaming. Imaginative, infuriating, wonderful, frustrating, joyful, tearful and ultimately entirely rewarding and magical. I kept the NES on for a week to prevent loss of progress."

Gregg Mayles, Rare





SUPER MARIO BROS. 3

DEVELOPER: Nintendo R&D4 **YEAR:** 1988 **GENRE:** Platform

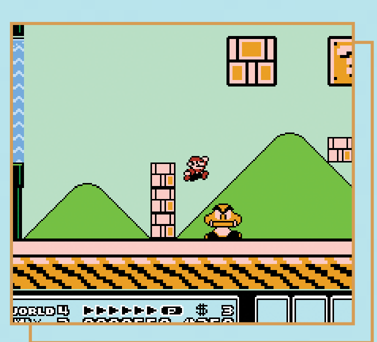
1 **For Nintendo R&D4,** developing *Super Mario Bros. 3* must have been a tough task. It would have been absurd to expect the development team to take an already-beloved classic and improve upon it in every single aspect. It is to the credit of Shigeru Miyamoto and his team that they didn't just attempt it, but managed to succeed in doing so.

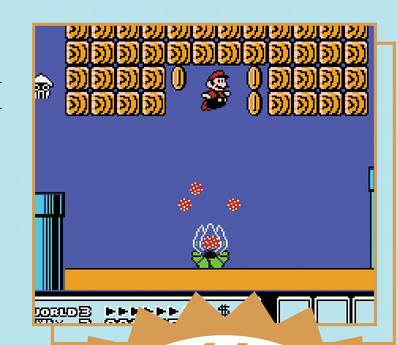
The Japanese version of *Super Mario Bros. 2* (known internationally as *The Lost Levels*) had been a very small upgrade over its predecessor, with slightly improved visuals and a few new hazards (such as the Poision Mushroom), and primarily offered more challenging stages for players that had mastered the original game. Contrast this with *Super Mario Bros. 3*, which offered all-new visuals, new music with additional sound effects, a variety of new enemy types, new power-ups, new blocks – if you could name something in the original *Super Mario Bros.*, Nintendo had managed to identify and implement a fantastic new spin on it in their new game.

These new elements allowed for some incredibly clever level designs too, from the floating platform challenge of stage 1-4 to the complex cannon arrangements of the airship levels. Many stages take new mechanics, implement them in every way you can think of, and then add a few you had missed just for good measure. Even something as simple as the introduction of sloped surfaces allowed for a new move and new opportunities for fun, as Mario could slide downhill on his backside and take out enemies with his momentum alone. What is truly amazing is that the high quality, inventive level designs are so consistent, given how numerous they are – the game's eight worlds feature an astonishing 90 stages.

With the American audience whipped into fever pitch by pre-release footage in the movie *The Wizard*, *Super Mario Bros. 3* was always going to do well. Even so, the game was an unprecedented commercial success, becoming the best-selling non-bundled NES game – and along with its predecessor, one of only two such games to exceed the 10 million mark. The game has been ported and remade often and continues to perform remarkably, selling over 3 million copies when remade for the Game Boy Advance, and another million as a Virtual Console game on the Wii.

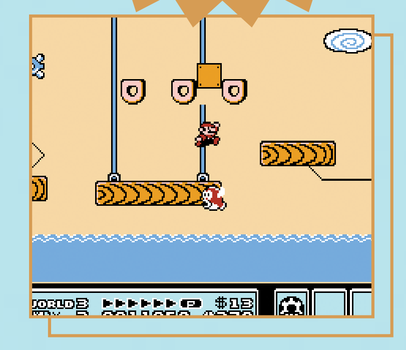
Super Mario Bros. 3 is a game that contains just about everything that a fan of platform games could want. If you want a game with tight, responsive control, that's covered. If you want variety, the game offers dozens of levels, many enemies and an array of interesting power-ups. If you want clean, attractive visuals and timeless tunes, this classic beast of a game has them. If there is such a thing as a perfect videogame, *Super Mario Bros. 3* is the closest that the NES ever got to delivering it.





“In 1991 as a birthday treat my Dad took me to the World Of Commodore show and offered to buy anything I wanted. We left empty handed and instead bought *Super Mario Bros. 3*.”

Steve Lycett, Sumo Digital




THIS GAME HAS WORKED
40 DAYS
WITHOUT AN ACCIDENT
EXIT

Ultimate Guide Lemmings

When a game disavows responsibility for loss of your sanity, hair or sleep, it's easy to dismiss it as hyperbole – but for Lemmings, it was closer to an understatement. We look back on DMA Designs' critter-saving classic

If you ever imitated another child's bad behaviour when you were young, you were almost certainly asked: "if your friend jumped off a cliff, would you do that too?" Of course, if you were like us you'd claim that you would in order to remain logically consistent, an act of dishonesty which only further frustrated the adult and saw us frogmarched to the nearest cliff. But if you were a lemming, that statement wouldn't be a lie – those guys just love chucking themselves off objects. They also love wandering into jets of flame, drowning, and generally doing very un-clever things. Not real lemmings, mind – their suicidal urges are something of a misconception – but the critters found in DMA Designs' *Lemmings*.

The 'save-'em-up' premise behind the game plays into the popular misconception that lemmings are suicidal creatures. A large group of tiny lemmings will be released into the stage at varying intervals, and continue to walk aimlessly forward until they either hit an object and turn around, or are given a job by the player. Of course, most of the time this aimless wandering won't just get them nowhere near their goal, but will quite often lead them into all manner of horrible situations, be it plummeting off a cliff, walking into jets of flame, drowning or simply becoming trapped in a situation they can't escape. This is where the job roles come in – these allow the lemmings to forge a path towards the goal by smashing up the scenery, climbing

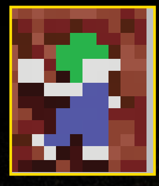

CLIMBER


FLOATER


BOMBER


BLOCKER


BUILDER


BASHER


MINER


DIGGER





Q&A MIKE DAILLY R&D and level design, Amiga version

The walking animation for *Lemmings* was the product of a self-imposed restriction of 8x8 pixels. Do you think this particular approach is useful in aiding creativity?
Actually, it wasn't a self-imposed limitation, it was purely technical. In the old days, you always wanted to draw things using the power of two sizes (8, 16, 32, 64 and so on), so the next size down from 16x16 was 8x8. So it was to fit within 'standard' limitations that started all this – as was normal then. As it happened, only the width mattered on the Amiga, so the resulting size of 8x10 was fine as well.

What was the most difficult aspect of creating *Lemmings*?
There were a few issues. Making the lemmings walk and move exactly, binding feet to ground rather than sliding, actually getting collision working on a pixel basis was tricky – and in fact, *Lemmings* never worked totally for 'steel' things. On console it was a nightmare of the highest order. The five screen bitmap was utterly horrible, and I am still amazed they managed to port it to the Game Boy!

***Lemmings* is known for its difficulty. Did any of the levels keep you puzzled for ages?**
Nope. By the time we were churning out levels, we were all so good very at it, we could solve any level in seconds – pretty much. The only tricky bit was actually doing the level, but even then most would be solved in only a few attempts.



Which of your levels is your favourite and why?
It's Hero Time is my all time favourite, because it had a little bit of lateral thinking, and was far from obvious as to how you do it. Lots of people – including testers at Psygnosis – got utterly stumped on it, which makes me happy.

With the benefit of hindsight, is there anything about *Lemmings* that you would have done differently at all?
Tech-wise, *Lemmings 2* solved everything as far as console went, but game-wise… it would have been nice with a background.

Have you ever had any memorable interactions with *Lemmings* fans?
We would occasionally get sent odd *Lemmings* items. Pillows, drawings – even wood carvings! I do meet some at shows, and that's always fun. What gets me most though, is the love of the game even after all this time. Seeing weird *Lemmings* 'things' happening – like the group that walked around a computer show one after the other dressed as lemmings – being Blockers and the like. That makes me smile!

▶ it, influencing the direction of other lemmings and surviving otherwise deadly situations. Each level has a set quota of idiotic lemmings that must be saved, as well as a stress-inducing time limit within which it must be done.

Despite the fact that *Lemmings* is a somewhat complex game, it provides an excellent example of a design principle that has fallen out of fashion over the years – education by level design. The early stages in the 'Fun' difficulty mode offer very simple puzzles that perfectly demonstrate the function of each job role as well as various objects within the game. While a short sentence might be given as a hint, the game doesn't hold the player's hand by any means. Even novice players can experience some degree of success, providing a crucial feel-good factor that hooks players on the game early. This also means that by the time players hit the stages where the challenge really begins to ramp up, they're well beyond the point of questioning how they should be playing, and only have to worry about finding a solution. While the difficulty curve isn't perfectly smooth, *Lemmings* does a great job of matching difficulty to player experience.

The genius of *Lemmings* is that while stage design provides some of the challenge, the rest is delivered by simply restricting the resources you're given to complete a challenge. A great example of this is found in the difference between an early level titled, Builders Will Help You Here, and the game's first truly challenging stage, Postcard From Lemmingland. The former stage gives you nothing but builders, and the solution to the stage is extremely obvious even to novice players. It's even possible to save every lemming, simply by having them build a stairway out of the pit that a few will inevitably tumble into. Postcard From Lemmingland provides exactly the same terrain, but drastically alters your options, ▶







» [Amiga] Early stages introduce players to the various jobs while providing little peril, which introduces a gentle difficulty curve.

» [Amiga] In a famous bit of overreaction, the 666 level was excised from certain conversions.



» [Amiga] Once you've set a path to the exit, watching the lemmings walk to it can become rather hypnotic.

CONVERSIONS

BEST | **WORST**

Covering every version would take the whole magazine, so we've picked the biggest hits and misses

BEST

COMMODORE 64

■ Despite utilising a multiload system, the game impressed many by flinging around up to 50 lemmings, as well as including a massive 100 stages – surpassing the Spectrum and Amstrad versions, meaning this is the one to go for on 8-bit computers.





PLAYSTATION 2

■ Based on Team 17's PSP version of the game, *Lemmings* for the PS2 is an updated version of the original game, with all 120 original stages plus 36 brand new ones. The star attraction is the EyeToy mode, which provides users with some surprisingly smart motion controlled stages to play.





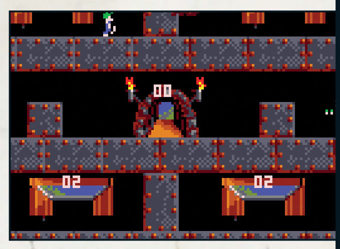
MEGA DRIVE

■ The Mega Drive version isn't the most accurate conversion, in part because of limitations on the width of levels, and it is missing some of the original Amiga stages. However, Sunsoft managed to make it up to Mega Drive owners with a number of exclusive stages, bringing the grand total up to a staggering 180.



ATARI LYNX

■ While some of the stage designs have had to be squashed vertically in order to fit the lower resolution, the Lynx conversion of *Lemmings* is one of the best, which should be expected as it was handled in-house at DMA Design. Of particular note is the ability to fast forward play, an appreciated inclusion.



MASTER SYSTEM

■ A stunning job was done with this 8-bit conversion. Pixel destruction made it into the game intact despite the constraints of the hardware. The game also contains 120 levels, though some have had to be simplified, as well as some new music alongside the original tunes we enjoyed so much.



WORST

GAME BOY COLOR

■ This should be an improvement over the surprisingly decent monochrome version, as it boasts the *Oh No! More Lemmings* levels and colour graphics. Unfortunately, it has major issues – poor scrolling being the primary complaint. However, the most unforgivable sin is the omission of the excellent original music.

NES

■ The NES struggles to provide a good game of *Lemmings*. 20 levels are missing and only a paltry 14 lemmings can be active at any one time. However, the real issue is the control scheme, which requires you to confusingly hold the B button to select skills rather than just selecting from the menu.

MAC

■ In many respects, playing *Lemmings* on a Mac is a surprisingly good experience. The higher resolution graphics are particularly good. Unfortunately, some stages – notably Pea Soup, become almost impossible due to your inability to distinguish between objects and the dangers.

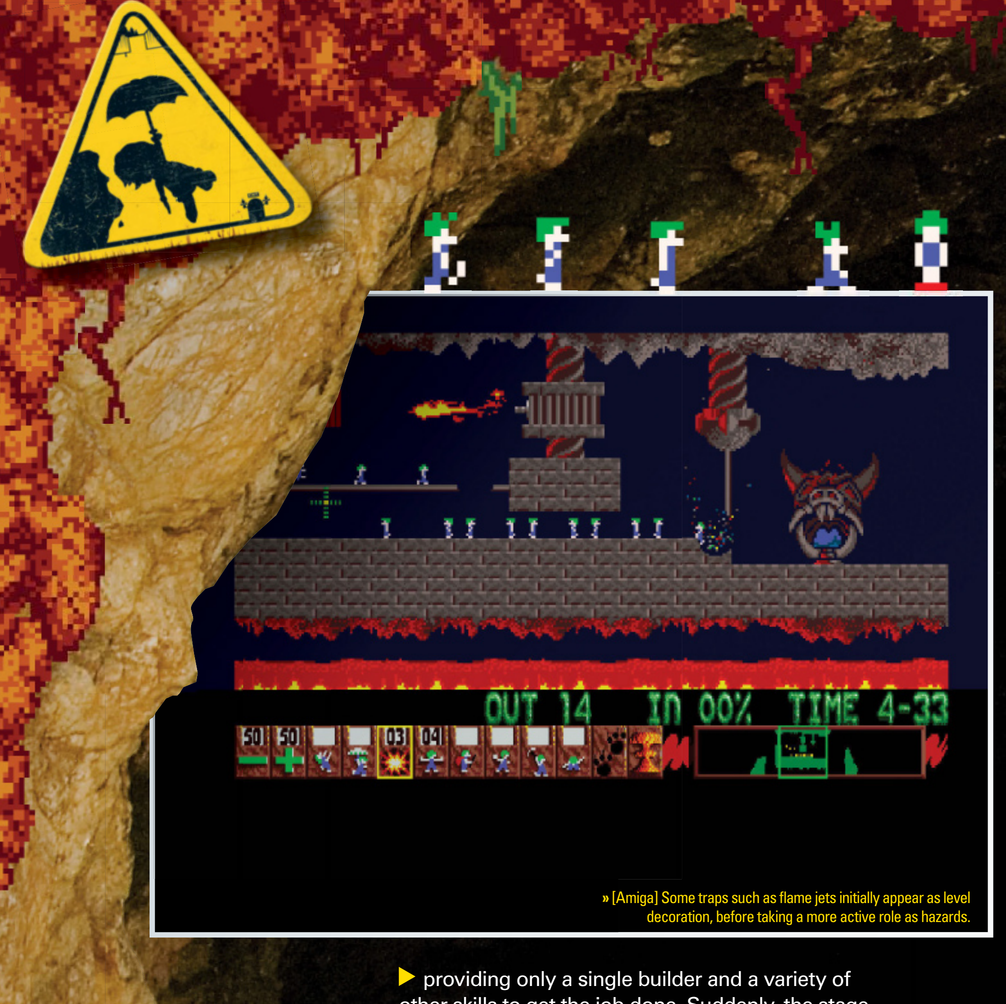
AMIGA CD32

■ It's the Amiga version of *Lemmings* – but on CD! This sounds fantastic, but what does it mean in practice? Not a lot. Two-player mode is gone, and there are no enhancements for the new format. Now consider that this version arrived in 1994, well after the sequel, but still came out at full price…

PLAYSTATION



■ You'd expect that a machine as powerful as the PlayStation should be able to do a perfect version of *Lemmings*, right? Unfortunately, the PlayStation version of *Lemmings* and *Oh No! More Lemmings* is actually missing stages and doesn't use the original graphics. A missed opportunity.



» [Amiga] Some traps such as flame jets initially appear as level decoration, before taking a more active role as hazards.

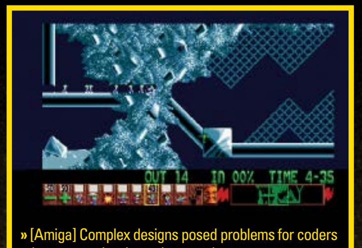
providing only a single builder and a variety of other skills to get the job done. Suddenly, the stage becomes a lot more difficult and requires some very creative uses of skills to make it through – for example, you'll need to figure out how to turn a lemming around without any blockers.

If that sounds frustrating, you're not wrong – *Lemmings* is a game which is inherently frustrating, and as repeated attempts to clear tricky levels bear no fruit you may find yourself pulling your hair out. However, the game has a number of excellent features which bring down your stress levels. The first is the fact that the lemmings themselves are so cute. Being comprised of only a few pixels each, you wouldn't expect them to have a great deal of personality, but the animation really draws you into their plight as you watch a lone lemming bravely climb a tall object or mine a path for the others. The simple act of watching so many of them at once can in fact be rather mesmerising, as they travel the undulating terrain.

Then, of course, there's the music. Originally composed by Brian Johnston, a number of replacement tracks were added by Tim Wright at the request of Psygnosis, which had become worried about music copyright. The result is that the game uses many popular public domain songs, including classical compositions and staples such as *London Bridge Is Falling Down.*



» [Amiga] In most versions, you can quit without nuking – but that doesn't carry the same satisfaction.



» [Amiga] Complex designs posed problems for coders when converting *Lemmings* to other systems.

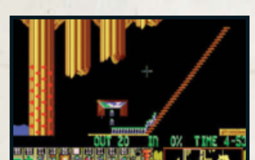
Q&A RUSSELL KAY

Programming, PC version

How did you end up working on the PC port of *Lemmings*?
Well Dave Jones and I were working on Spectrum games together before he started DMA Design and bought his Amiga, so I graduated from the Spectrum to the PC (the processors are similar) and did PC ports for DMA, so it became my machine. When *Lemmings* came around, I did the original demo on the PC but I had my finals at University to do before I could give the game my full attention, so Dave started the game and I returned (having finished my finals) and got going on the PC port.

What technical challenges did you face?
Well there were a few: a lack of PC hardware support, the Amiga had a Blitter, I had a poor CPU; the lack of colours, initially we were doing EGA only, though we eventually did a VGA version; there was a shortage of memory, you could only reliably get around 512KB of main RAM on a PC back then; the was also a myriad of PC types out there, with varying RAM, graphics capabilities and disk sizes. We were essentially doing four different versions (EGA/VGA, CGA and Tandy), and having to cope with a lack of two mice, for the much lamented lack of two player mode, I'm still sore about that one…

We shared a lot of code back and forth with me doing some of the skill types (Walker, Climber that sort of thing) and the basic structure of the code is the same, I had to do a



lot more with the various components that the PC had, with an attempt at interrupts to get a reliable raster split – I really wish I had not done that…

How do you feel it compares to the Amiga version?
I am very pleased with it, it holds up really well over time and it worked very well for PCs of that era.

What's the best version of *Lemmings* and why?
I think they both hold their own – over time I see that the PC version is the best known one, mainly because it had the largest audience. It is only in Europe that the Amiga one is well known, though there are still a lot of PC users over here.

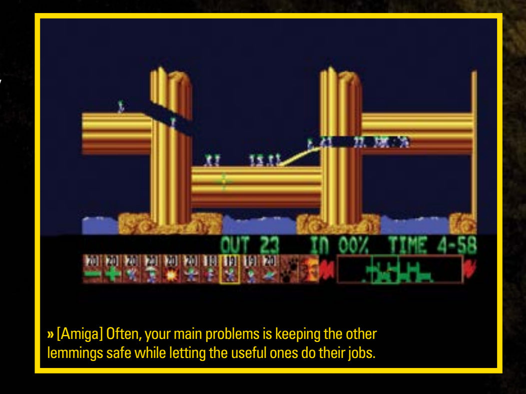
Why do you think the game remains so popular with gamers?
Simplicity – the gameplay is easy to get, it is simple to pick up and the game itself has a good learning curve (we worked hard at that), so it is easy to get into…

Finally, we'd like to hear an anecdote of your time working on *Lemmings*.
At the time when we were looking for a publisher everyone we showed it to loved it, but thought it was too much of a risk to publish it. Even Psygnosis did initially, it was only later that Dave managed to persuade Ian Hetherington that it was worth the risk!

Not only was the result catchy, but weirdly effective in reducing stress – after all, it's hard to stay mad at a game which is playing *How Much Is That Doggy In The Window*. The sound effects also added to the cuteness of the lemmings, as they had high-pitched voices which would play at the beginning of each stage ("let's go!") and when you needed to make them explode ("oh no!").

Sorry, did we say 'needed' to make them explode? That might have been a tad disingenuous, because while it's certainly true that you'll need to use the occasional bomber to blast through some of the game's 120 levels, most of the time exploding lemmings were simply the result of player frustration. When a stage is lost, or you have a few blockers that need disposing of, or even when you just feel like it, the nuke button is your best friend. A double-click on it will activate a five second countdown for every lemming on the screen and result in a screen full of violently shaking critters, followed by a round of explosions that would please even Michael Bay. While this has become the default option for quitting a stage, the truth is that most versions of *Lemmings* actually have a non-nuclear option to quit the stage – they're just almost never used because nuking is far more fun.

Speaking of rarely-used options, one of the best features of the Amiga original was the two-player mode of *Lemmings*. This took place across 20 specially designed stages and saw players competing to rescue the most lemmings. While you could only assign jobs to your own lemmings, the competitiveness of the two-player mode arose from the fact that you could direct your opponent's lemmings into your own base, effectively stealing them. It's a fantastic design but it was often difficult to replicate on other systems, and is usually the first aspect of *Lemmings* to be scrapped during porting.



» [Amiga] Often, your main problems is keeping the other lemmings safe while letting the useful ones do their jobs.



Q&A TIM WRIGHT Music, Amiga version



How did you originally go about composing the music for *Lemmings*?
Firstly, I had the basic premise of adapting well-known hummable folk tunes, to replace existing tracks that were problematic in terms of copyright, like the theme from *Batman* for instance.

Secondly, I was a dab hand at Karsten Obarski's Soundtracker and the follow-up called NoiseTracker, but I was told to write the music in a supplied tracker program – Linel's Sound FX if I recall correctly.

Thirdly, there were tight restrictions in terms of memory, permitted musical effects within the editor (i.e. none) and only three channels so that there was always one channel free for sound effects.

Brian Johnston had composed all of the music at that point, but they'd removed several of them for legal reasons. Some of his tunes remained, and they're also well remembered… like *Ten Green Bottles*, *The Can-Can Theme*, *How Much Is That Doggie In The Window?*, and his original tunes too.

The memory constraint meant that there wasn't much room to have samples per track, so there was a bit of instrument sharing. However, this eased up a bit towards the end and I was asked to create cover versions of well known Psygnosis music to be included within the game – tracks from games like *Menace* and *Shadow Of The Beast* – tricky stuff when you've only got three channels and a lot less memory than the originals.

I kinda chose which classic songs to cover at random… whatever popped into my head really; old folk melodies, Christmas hymns and so on. There were some original compositions in there too, just to spice things up a little, along with some mash-ups where I'd blend two tracks, or adapt known themes with my own melodies.



How long did it take and what problems (if any) did you encounter along the way?
I recall it took around a week or so, as there was a pressing deadline. But then I got a few more days to create the Psygnosis game cover versions I mentioned earlier. I didn't really encounter any problems during the composition phase, aside from trying to get the most out of the samples I shoehorned in to the available memory. There are well known tricks you can use with the likes of NoiseTracker, but none of that was allowed… I could only trigger notes, so it was hard work in that respect.

Were you involved with the sound effects of the game and who supplied those voices?
I was brought in towards the end of the project, so the sound effects were all done and dusted at that point. I believe the original *Lemmings* were voiced by Scott Johnston's Mother, and then played back at a much faster speed to give them that classic chipmunk sound.

Why were there so many remixes of classic tunes?
I think Psygnosis were quite keen on the idea that the tunes were rip-offs from TV shows, and other well known folk or public domain tracks. But they didn't want any nightmares in terms of copyright and law suits, so I suggested we just stick to well known music that was out of copyright. So there were some riffs taken from folk tunes, classical music, religious hymns and so on.

TRICKY TERRAIN

These are some of the most infamously difficult levels Lemmings has to offer, alongside some helpful tips

Postcard From Lemmingland

Tricky #19

RESOURCES

x10	x1
x10	x1
0	x1
0	x1

1 In previous versions of this stage you'd use a builder here, but you only have access to one now. Use your Basher instead, to clear a path to the pit for all of your lemmings.

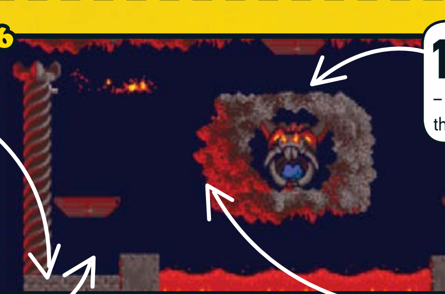
2 Send a single climber up here. While you're at it, also ensure that you make it into a Floater – you need to save every lemming in this stage and it'll be climbing to the far left wall later on.

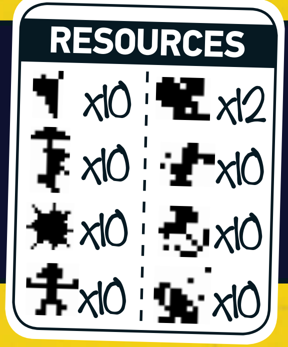
3 This is the trick of the stage. Use your Digger straight away before the exit, and then assign it as a builder immediately. It'll reach the side of the small hole it just dug and turn around.

4 Now that your lemming is facing left, make it into a Miner. Be quick though – if it isn't close enough to the exit, your other lemmings won't be able to reach the tunnel to freedom.

Triple Trouble

Taxing #26





1 With your first lemming, dig a hole slightly to the right of where it landed – this will ensure you save the ones at the top without any undue worries.

2 Start a Builder off in this corner, and keep it in action until it reaches the stone circle. To protect your other lemmings, dig a hole beneath where the new lemmings are falling in.

3 Once your Builder has reached the stone circle, have him bash his way through it and create a path to the exit.

4 Use a Builder to repair the hole you dug earlier, completing the path. Now all you have to do is repeat this process on the other side!

Down, Along, Up. In That Order

Mayhem #5

RESOURCES

x2	x5
x2	x1
x10	0
x10	x5

1 Send a climbing Floater over each side of this structure and block off the fire pits at each end of the level. To free the rest of the lemmings, dig at the left and right alternately.

2 You may wish to use a Blocker to keep a small group of lemmings aside here for visibility – ten should do. Have a Builder work its way up to this first ledge.

3 Create a Blocker to stop your lemmings from going over the edge, then start a builder towards hitting the Blocker. It'll turn around mid-build and keep on working!

4 Rinse and repeat, remembering to ensure that your Builder will hit your Blocker and turn around while continuing to build. Free any remaining lemmings by removing Blockers and finally, exhale!

No Added Colours Or Lemmings

Mayhem #20

1 Once your second lemming reaches this spot, assign it as a Blocker. You need to rescue all lemmings here, but don't worry – you will rescue this helpful chap later.

2 Use the first lemming which you singled out from the pack, bash through this wall to create a path towards the exit.

3 Wait until the lemming reaches the edge of the platform to assign it as a Builder – it needs to hit the wall so it'll turn left when it's done.

4 Finally, assign your lone lemming as a Miner to tunnel under the Blocker you assigned earlier, which will free it. Once it's done, make it into a Climber and you're golden!



Q&A DOMINIC WOOD

Programming, Master System and Game Gear



Had you played *Lemmings* before starting work on the conversion? If so, what did you think of the game?
I had played it (PC version I think) and I enjoyed the game, although I wasn't addicted. My friend's granny used to play it apparently! It's one of the first crossover casual games. When I was developing I didn't have time or the eye sight to play games in my spare time as I didn't have much. However when we had the contract we used to play it a *lot*.

What were the major challenges Probe faced in converting *Lemmings* to Master System/Game Gear?
Firstly, how to build a destructible/buildable landscape with a character based screen system with a limited number of characters, that was interesting. Secondly, how to get that mouse feel with a game controller. I spent a lot of time and effort on that, adjusting the acceleration/deceleration and coding immediate response with a change of direction, it was commended in the reviews. My aim was to beat the team working on the Game Boy version.

How much contact did Probe have with DMA/Psygnosis during the conversion process?
Not a lot from what I remember, I guess the original was coded by another external team, it would have been good to have hooked up with original dev team. But in those days, conversions were passed out and you certainly wouldn't be involved. Sega Japan sent a funny email on something we missed a day before production; it was completely true but would have meant a complete 100 level re-test so we didn't implement it.

Why do you think the conversion went so well?
Great game! We had a good team Neil Young (EA, ngMoco, N3twork) managing although I don't remember him having to chase us that much, it was also the first game Rob O'Farrell worked on as test, he's a big cheese at EA UK now.



The popularity of *Lemmings* during the early Nineties was enormous. The initial Amiga release was followed by conversions for what seemed like every format available, from the 8-bit computers and consoles to the rather more exotic likes of the CD-i, SAM Coupé and Sharp X68000, and even the new generation of consoles such as the 3DO. Despite the fact that we've singled out some versions of the game for praise and criticism later in this feature, it's worth noting that the core experience is so strong that you'll probably have fun with any you care to pick up. The popularity of the game was accompanied by massive critical success, with many reviewers recognising the clever puzzles and addictive qualities of the game.

An expansion pack titled *Oh No! More Lemmings* soon followed, but was much less widely available than the original game, appearing on PC, Atari ST, SAM Coupé, Macintosh and Acorn Archimedes. The levels were also present in the Game Boy Color, PlayStation and Mega Drive versions of the game in varying number. Also of interest to *Lemmings* enthusiasts are the excellent Christmas *Lemmings* demos given away on magazines, which provided brand new winter-themed stages for players – a rather excellent Christmas present in itself.

> **"As well as the addictive, multitasking game play, ingenious use of physics and black humour we (the artists) loved how the DMA guys managed to cram so much character and fluid animation into an 8x8 pixel figure, it really brought the game to life. A lost art these days"** Jeff Bramfitt, Psygnosis

Lemmings is still a unique game – even other save-'em-ups like *Chu Chu Rocket* resemble it only tangentially – and one which ranks alongside the likes of *Tetris* as one of the few games that can claim to have near-universal appeal. At a time when games were marketed almost exclusively to young males, *Lemmings* found popularity with all audiences. The cute characters were appealing in a way that was easy for anyone to understand, and the game gently eased players in, so even if you'd never played a videogame before you could probably get the hang of *Lemmings*. And once you were in, you were hooked – *Lemmings* is a strong game design which could keep players playing long into the night. In fact, we think we can hear an enthusiastic cry of "let's go!" right now – though that might just be our addiction kicking back in. Okay then, one more go… ★



» [Amiga] We All Fall Down is a level that returns repeatedly throughout the game, getting harder each time.







SEGA SATURN

21 years ago, Sega had conquered Earth and was looking to expand its empire across the galaxy, but poor decisions and an unexpected invader foiled its plans. Nick Thorpe looks back at how the Saturn failed to run rings around its competition – and why it can still stand proud alongside them

Sega's Saturn is an odd machine. It's a console which was launched by a market leader but quickly outgunned by a competitor with greater resources, and one which brought its manufacturer long-desired domestic success but caused the collapse of its international empire. The Saturn was a console ill-equipped to compete in the marketplace of the mid-Nineties, but the qualities that ensured that are the very same qualities which have caused it to age splendidly. To find out how the machine ended up as such an oddity, we'll need to go back to the beginning.

As early as 1993, Sega was looking towards replacing its incredibly popular but ageing Mega Drive hardware – it wasn't in any rush to abandon the platform, but as a forward-thinking console manufacturer the company was aware that the machine couldn't last forever. As had been the case with previous Sega hardware, the new machine was being designed in Japan by Hideki Sato's engineering team. However, times had changed – when the Mega Drive had been designed, Sega of America was a tiny entity and Sega Europe didn't exist. However, Sega's success in the 16-bit console war had seen both branches experience rapid growth, and they had their own ideas of what the next machine would look like.

While Sato's team was busy putting together its own design, a variety of ▶




SEGA SATURN™
POWER
OPEN
ACCESS
RESET



» The AV out port handles S-Video, RGB Scart, Composite and RF.

▶ suitors were approaching Sega hoping to make their own console designs a reality. Trip Hawkins offered Sega the opportunity to get on board with the 3DO. Sega of America proposed a partnership with Sony, in which hardware rights were shared and software rights were split. Silicon Graphics Inc, most famous for providing hardware to Hollywood special effects teams, approached Sega with a promising chipset a little later. Sega's response in all three cases was to reject the outside designs and rely on its own people, for reasons explained by former Sega of America CEO Tom Kalinske in our interview box out.

Sato's team eventually produced a design which was both complex and costly. The Saturn employed two Hitachi SH2 processors for processing and two custom VDP chips for graphics, along with a dedicated Motorola 68EC000 processor to drive the Saturn Custom Sound Processor chip. The hardware design ensured that the Saturn was a major advance over the 16-bit consoles, as former Iguana coder Steve Snake explains: "It was pretty similar to work with, just much better. It had a lot more RAM, speed, sound and graphics capabilities. The limitations you had to work around with previous consoles were mostly non-existent."

However, the Saturn's standing as compared to its competitors is a point of contention, even now. While it definitely had strengths – most notably some incredibly good sound hardware – it's often accused of being underpowered and difficult to work with, contributing to the long waits Saturn owners faced when waiting for PlayStation conversions.

It's an assessment that *WipEout* designer Nick Burcombe concurs with. "Technically, it was of course inferior to PlayStation, although as I recall, nowhere near as bad as the PlayStation fans and press were making out." *Alien Trilogy* developer David Shea, whose PlayStation version arrived five months before the Saturn game hit shelves, elaborates: "The Saturn was difficult to write for compared with the PlayStation. It used quads rather than triangles, which made for messy 3D maths, and the PlayStation came with (at the time) an awesome development kit and software libraries. You could look more impressive faster on the PlayStation, without being an assembler head."

However, not every developer was so unimpressed with the machine, as Steve offers a contrary point of view: "I heard a lot of people complain that it didn't come with any software libraries, and it was too complicated. I never understood that. The previous consoles didn't have any libraries

STAY IN CONTROL

Initially, the rest of the world received a different Saturn controller to Japan. See how they stack up…

JAPANESE PAD

SHOULDER BUTTONS
■ Satisfyingly clicky, with a pronounced ridge to distinguish them from the body.

FACE BUTTONS
■ Similarly sized to the Western pad, but with softer edges and a better feel.

D-PAD
■ A similar design to the Mega Drive's D-pad, but with the hard edges of the cross rounded off.

BODY
■ More elegant curves make for a nicer-looking pad than the Western design.

WESTERN PAD

SHOULDER BUTTONS
■ Shallow and spongy, these offer poor tactile response when pressed.

D-PAD
■ The concave centre leaves you hunting for the odd circular ridges to sense direction.

FACE BUTTONS
■ The plastic feels cheap, though the pronounced edges feel good under the thumb.

BODY
■ Angular and awkward, with a more pronounced curve than the Japanese pad.



» [Saturn] *Daytona USA*'s roughness exemplifies the Saturn's teething problems, but it delivered on gameplay.



» [Saturn] With RAM expansion cartridges the Saturn's 2D arcade ports outperformed their PlayStation equivalents.

either – programming straight to the metal is what we were all used to, and it allowed you to get the most from the machine. Even systems like the Amiga that did have libraries – most games didn't even use them at all! As for 'too complicated' – sure, it was packed with a lot of hardware – but you didn't have to use it all if you didn't need it. It was good to know it was there when you did, and none of it, taken on its own, was hard to work with."

It seems that working well with the Saturn was a matter of catering for the machine's idiosyncracies – approaches which worked on other systems would fail if not tailored to the Saturn's unique hardware. "When I started the project, I had to do a demo for id Software to approve," says Jim Bagley, who worked on the Saturn version of *Doom*. "I started by extracting all the levels and audio and textures from the WAD files, and made my own Saturn version of this, then got an early version of the renderer working using the 3D hardware. The demo got sent off, and a couple of days later I got a call from John Carmack, who stipulated that under no circumstances could I use the 3D hardware to draw the screen, I had to use the processors like the PC. Thankfully I enjoy challenges, so it turned out to be a really enjoyable project, using both SH2s to render the display like the PC did it, using the 68000 to orchestrate them both." Carmack's stipulation might have made for an interesting coding challenge, but Jim concedes that it "kneecapped" the Saturn game, which suffered from a poor frame rate and general slow speed.

Early titles demonstrated some of the struggles that developers faced. The Saturn hit Japanese shelves on 22 November 1994, with five titles initially available. Four of them were of little consequence: traditional board game *Mahjong Goku Tenjiki*, FMV murder mystery *WanChai Connection*, ball-rolling puzzler *Tama* and a port of *Myst*. The big hitter, which sold at an almost 1:1 rate with the console, was Sega's conversion of its hit arcade game *Virtua Fighter*. Despite the presence of some graphical imperfections in the form of polygon drop-out, import reviews were incredibly enthusiastic, with *Edge* going so far as to call it the "the first true 'next generation' console game." Sega press releases of the time claim that half a million Saturns were sold within a month of the Japanese launch, giving the system a great start to build from.

However, the PlayStation arrived less than two weeks after the Saturn, alongside a stunning conversion of Namco's *Ridge Racer*. "I remember seeing *Ridge Racer* running on a prototype PSone and being blown away," recalls David. "I don't ever ▶



» The internal battery is used to set the time and store saves. If it dies, you lose your precious saves.

SPEC OPS

The Saturn and its main competitors go head-to-head



	PLAYSTATION	SATURN	NINTENDO 64
STORAGE	CD-ROM (up to 650MB)	CD-ROM (up to 650MB)	Cartridge (up to 64MB)
CPU	32-bit MIPS R3000A-compatible RISC (33.87 MHz)	Twin 32-bit Hitachi SH2 (28.6 MHz each)	64-bit MIPS R4300i (93.75 MHz)
RAM	2MB main RAM 1MB video RAM 512KB audio RAM	2MB main RAM 2x 512KB video RAM 512KB audio RAM	4MB shared RAM
3D GRAPHICS PERFORMANCE	180,000 polygons per second with texture mapping and gouraud shading	200,000 polygons per second with texture mapping	150,000 polygons per second with all effects enabled (including perspective-corrected texture mapping, shading, anti-aliasing and texture filtering)
SCREEN RESOLUTION	Minimum 256 x 224 Maximum 640 x 480	Minimum 320 x 224 Maximum 704 x 480	Minimum 256 x 224 Maximum 640 x 480
SOUND	CD audio; SPU supporting 24-channel ADPCM playback	CD audio; Saturn Custom Sound Processor supporting 32-channel PCM playback and FM synthesis	Shared Reality Signal Processor supporting up to 100-channel PCM playback (16-24 typical); supports other sound formats with software codecs



» Here's an interesting fact. The reset button on Samsung's Korean model doesn't actually work!

remember that same feeling from the Saturn at all." In part, this was because the Saturn's titles suffered in early comparisons. When *Daytona USA* hit the Saturn, it played well but showed the teething issues that teams were having – it suffered from a low frame rate, major polygon pop-up issues and letterboxed presentation, none of which affected the PlayStation title. *Battle Arena Toshinden*, a PlayStation fighting game, offered a texture-mapped look which set it apart from *Virtua Fighter*. As a result, the Saturn gained an early reputation for being bad at producing 3D visuals.

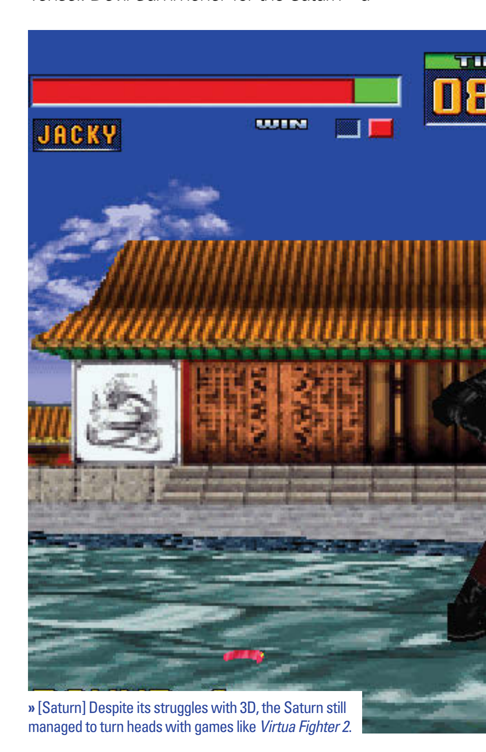
The system's standing wasn't helped by a disastrous international launch. Knowing that Sony would provide formidable competition, Sega's president Hayao Nakayama wanted to get an advantage with early adopters by bringing the Saturn's launch date forward from the announced September 1995 date. Despite resistance from both American and European branches of the company, Nakayama would get his way. Tom Kalinske's keynote speech at the very first E3 show on 11 May 1995 included expected details such as the Saturn's features and its price – a rather steep $399 – but also included the unexpected announcement that the console was on sale that very day. Sony spent the show intent on taking the wind out of Sega's sails – both literally, when staff deflated Sega's prominent inflatable Sonic, and figuratively, by printing leaflets with messages including "If you buy a Saturn, your head is in Uranus." But the biggest blow came when Steve Race, a former Sega employee, made an incredibly short speech about the PlayStation's price. "$299," he uttered, before walking straight back off the stage.

The surprise American launch caused a number of problems. Sega managed to alienate key suppliers such as KB Toys, as only four large retail chains were selected. Additionally, third parties weren't given adequate time to prepare software for the machine, leaving just six Sega-published games available at launch. Early adopters were further starved of software, as only two more games were scheduled to launch before the original September date. The European launch, brought forward to July 1995, was similarly under-promoted and barren. As 1995 drew to a close, Sega was already having to fight back against the the PlayStation, which had received an impressive launch.

Thankfully, Sega's teams had managed to get to grips with the Saturn and had readied a trio of key arcade conversions for the Christmas season. *Virtua Cop* was an addictive lightgun shooter with an excellent scoring system. *Virtua Fighter 2* could lay claim to being the world's best fighting game and though it wasn't arcade perfect, the conversion was a beautiful piece of software, running at 60 frames per second in the Saturn's high resolution mode. *Sega Rally Championship* was a similarly potent shot back at accusations of 3D inadequacy, as well as being one of the best arcade racing games ever made. All three had a commercial impact, particularly *Sega Rally* which became the fastest-selling CD-ROM software ever released in the UK, but when all was said and done the PlayStation was still ahead.

But as the Saturn started to fall behind in the wider world, it was thriving in its homeland of Japan. It was a curious divide – what was the difference in approach? In part, it's simply because some of Sega's big games mattered more in Japan. In the UK, *Virtua Fighter 2* was lauded by the likes of *Mean Machines Sega* and *C&VG* and sold well for a Saturn game. In Japan, it was a million-selling phenomenon. To give you a rough idea of how much the series means to Japanese gamers, consider this: in a 2006 poll to determine the top 100 games of all time, Famitsu readers ranked *Virtua Fighter* higher than the likes of *Sonic The Hedgehog*, *Super Mario World* and *Tetris*.

That alone is insufficient to explain the Saturn's Japanese success. However, it becomes much easier to understand when you consider that by the end of 1995, Sega had the likes of Atlus making exclusive RPGs such as *Shin Megami Tensei: Devil Summoner* for the Saturn – a



» [Saturn] Despite its struggles with 3D, the Saturn still managed to turn heads with games like *Virtua Fighter 2*.

SEGA'S NEXT TOP MODEL

The Saturn has a surprisingly high number of hardware variants…








HI-SATURN NAVI
■ Hitachi's other Saturn model included additional GPS navigation features, as well as a portable monitor for in-car use.

SEGA SATURN (JAPAN)
■ Here's the standard Japanese model of Saturn, as available from launch – a big slab of grey plastic with blue buttons.

SEGA SATURN (WHITE)
■ A cheaper model of the Saturn with a small casing redesign, available in Japan. A black version of the same case was introduced in the West.

SEGA SATURN (EXPORT)
■ The Saturn was given a makeover for its international debut, sporting a new all-black look and a redesigned control pad.

SKELETON SATURN
■ Another Japanese Saturn with a transparent case, this was a tie in with Derby Stallion and lacks the This Is Cool branding.

» Games like *Burning Rangers* proved that the Saturn was more than capable of impressive 3D.



> **"I got a call from John Carmack, who said that under no circumstances could I use the 3D hardware"**
> Jim Bagley

massive boon, as the genre is enormously popular in Japan. This allowed Sega to build its customer base and a steady stream of classic RPGs made their way to the system over the years, including the likes of *Grandia*, *Princess Crown* and the *Langrisser* series. Special mention must be made of the *Sakura Taisen* series, a strategy RPG with dating sim elements which became a hugely popular franchise, spawning spin-off media and even a Tokyo cafe. All of the games mentioned above were exclusive to the Saturn for at least a year if not permanently, cementing the system as a good buy for RPG fans.

Going into 1996, it became clear that the Saturn was losing further ground outside of Japan. Sega had needed to slash prices in order to compete with the PlayStation, though it wasn't outwardly admitting that fact. "Up yours, we won't panic, you're the ones who are frightened, you're the ones running away and we're going to kick your arses while you're running," was Sega's European marketing director Andy Mee's response to one Sony price cut. The reality couldn't be more different. For all of Sega's bravado, there were three times as many PlayStations as Saturns in European homes in October 1996 and the gap didn't look like closing, especially after the console's planned Christmas blockbuster *Sonic X-Treme* was cancelled due to development issues.

Worse yet, the Saturn had gained more competition in June 1996. The long-awaited Nintendo 64 hit the ground running with the groundbreaking 3D platformer *Super Mario 64*, considered to be a strong contender for best game ever. While the machine would never achieve tremendous levels of success in the Saturn's stronghold of Japan, it quickly surpassed the Saturn in the West and drew attention away from Sega's system. However, something funny started to happen that year – having realised that their machine was falling out of favour with publishers and the media, Saturn fans began to club together and look beyond the mainstream.

Websites such as Dave's Sega Saturn ▶



HI-SATURN

■ A black Japanese Saturn with white buttons, manufactured under licence from Sega by electronics giant and Saturn CPU supplier Hitachi.



V-SATURN

■ Saturn CD-ROM drive supplier Victor (better known as JVC) manufactured this grey Japanese Saturn with colourful buttons.



SAMSUNG SATURN

■ Manufactured by Samsung to get around South Korean trade laws, this Saturn model is known for having a faulty reset button.



SEGA SATURN (SONIC STAMP)

■ Despite Sonic being underutilised during the Saturn years, Sega still saw fit to stamp his silhouette on this.



THIS IS COOL SATURN

■ A Saturn with an awesome see-through case, produced in limited numbers for the Japanese market. Now an expensive collector's item.

THE THIRD DIMENSION

While the Saturn's strengths didn't lie in 3D graphics, some games pushed the limits hard...



NIGHTS INTO DREAMS
SONIC TEAM

■ The high points in *NiGHTS* are some of the most impressive sights you'll see on the Saturn, from the underwater section of Splash Garden to the warping world of Soft Museum. We have a major fondness for the climactic battle with Wizeman, which stands out by showcasing some rarely-used effects.



SONIC R
TRAVELLER'S TALES

■ *Sonic R* boasts racetracks that could easily form the basis of proper Sonic platforming stages, thanks to their multiple shortcuts and extra routes. Everything is suitably colourful and environments look top-notch, especially as a clever fade-in effect masks the game's low draw distance – a common problem on the Saturn.



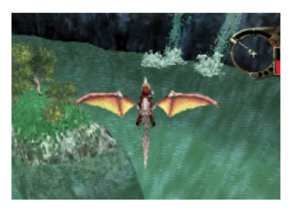
BURNING RANGERS
SONIC TEAM

■ Sonic Team's final Saturn release wrings about as much out of the machine as possible – real transparencies, huge environments and lighting effects are all on show. However, the Saturn is noticeably creaking under the strain of everything being asked of it, perhaps showing that its limits had been reached.



DEAD OR ALIVE
TECMO

■ Tecmo's fighter brings a high resolution display and silky frame rate to the ring. It's a close call between this and *Virtua Fighter 2*, but *Dead Or Alive*'s backgrounds seem to work as intended more often than those in Sega's game, better compensating for the loss of the arcade version's 3D backdrops.



PANZER DRAGOON SAGA
TEAM ANDROMEDA

■ One of the more expensive Saturn games also happens to be one of its prettiest, which is no surprise as its predecessors were also great in their day. Environments look incredible in *Panzer Dragoon Saga*, but battles steal the show with dynamic camera work adding to the sense of action.



» This cartridge slot is used not for games, but to add additional RAM, or devices like the Action Replay.

▶ Page (www.sega-saturn.com) and the infamous UK:Resistance (www.ukresistance.co.uk) became important community hubs for Saturn owners, providing news and reviews for the system while maintaining a close 'insider's club' feel. This fan support persisted as there was a whole lot of great software available – Sega continued to release conversions of excellent arcade games such as *Virtual On* and *Fighting Vipers*, as well as amazing console exclusives like *NiGHTS Into Dreams* and *Panzer Dragoon Zwei*. Some third parties began to get to grips with the machine too, as shown by releases like Lobotomy Software's *Exhumed*, Treasure's *Guardian Heroes* and Capcom's 2D fighting games. The Saturn might have been struggling to attract new owners, but it was doing a great job of entertaining its existing audience.

The Saturn entered a period of commercial decline in the West during 1997, in part because the non-Japanese branches of Sega had conceded defeat and were already looking to the future – and that meant new hardware. "We won't catch Sony up, there's no doubt about that," Andy Mee stated in the first issue of *Saturn Power*, mere months before being made redundant as Sega sought to cut costs. Sega of America CEO Bernie Stolar was even more explicit when he said "the Saturn is not our future" during a keynote speech at E3. It wasn't an untrue statement, but spoken in June 1997 it was a premature one as Sega wouldn't have a new console ready for almost a year and a half. The result of the speech was that Western retailers, publishers and press alike had sufficient reason to abandon the Saturn – and they began doing just that.

> **"It was nowhere near as bad as the PlayStation fans and press were making out"**
> Nick Burcombe

In Japan, the Saturn was in the middle of its busiest year yet. 351 titles were released for the console in 1997, substantially more than either of the other markets ever received during the Saturn's entire lifetime. This thriving market didn't just benefit gamers in Japan – the same hardcore gamers that sought their own coverage online were looking beyond the mainstream for games too, and found that the import scene was providing an abundance of them. In particular, the machine catered well to arcade fans who prized the 2D shoot-'em-ups and fighting games that were falling out of fashion in the West. RAM expansion modules were released which allowed closer conversions than could be achieved on the PlayStation, including more animation frames and in some cases additional features. In the UK, *Sega Saturn Magazine* would refocus around this hardcore audience and became a rare example of an official publication that covered the import market, providing in-depth looks at games like *Metal Slug* and *X-Men Vs Street Fighter*.

But while the Saturn had its strongest ever year in Japan, Sony managed to trump Sega in the RPG race. Squaresoft's *Final Fantasy VII* was a monster hit upon



» [Saturn] Sonic was something of a non-factor on the Saturn, reduced to spin-off and compilation releases.

its launch in January 1997, selling over two million copies in just three days and helping to draw players away from Sega's hardware. The Saturn would maintain a decent standing and hosted many of the year's best-selling games, but the PlayStation had clearly pulled in front and was still accelerating. Unlike in the West, where the company had basically given up marketing the system, Sega was still in a good enough position that it could revitalise its brand. The company began a new advertising campaign around the character Segata Sanshiro, a parody of film character Sugata Sanshiro who would punish people who weren't playing the Saturn with judo throws. The character gained a cult following and the renewed marketing push helped to sustain the system into 1998, even spawning a spin-off Saturn game.

But for fans of the Saturn, 1998 was to be a bittersweet year. The final few games that trickled out in the West included absolute classics like *Panzer Dragoon Saga* and *Burning Rangers*, but release schedules were barren. In Japan, hardcore shoot-'em-up *Radiant Silvergun* turned heads and *Sakura Taisen 2* sold

» [Saturn] *Panzer Dragoon* was the most expensive game Sega had ever developed.

» [Saturn] Games that were ported from other systems tended to struggle on Saturn.

» We're not a big fan of the chunky Western pad but many gamers swear by it.

» [Saturn] *Radiant Silvergun* was a stunning late release, perfectly ported due to its origins on the ST-V arcade board.



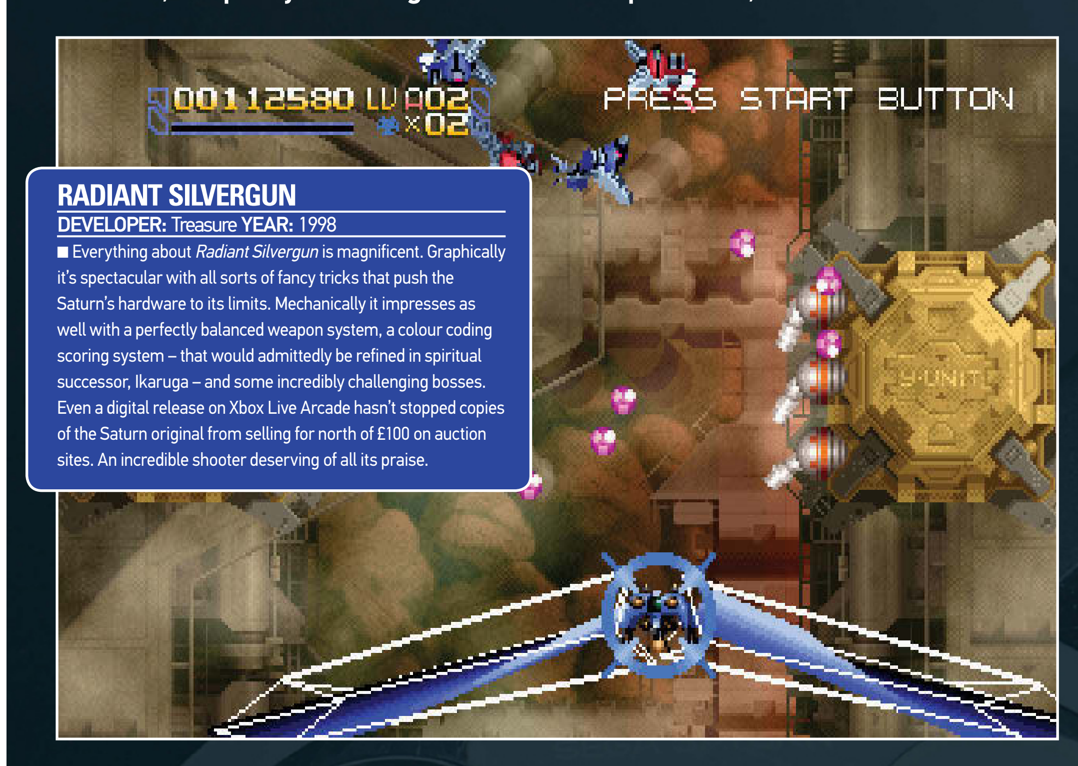
half a million copies in a blockbuster first week, but software production was evidently winding down as Sega prepared to introduce the Dreamcast, with over 100 fewer titles produced than in 1997. The machine was for all intents and purposes finished, though a handful of games would be released in 1999 and 2000 (less than 20 in total), including the excellent *Street Fighter Zero 3*.

It's not hard to see why the Saturn failed so spectacularly in the West – put simply, it was the wrong machine for the time. Tastes were shifting, both in terms of what games looked like and how they played. Polygonal graphics became the norm in the Saturn's generation, and the Saturn wasn't best equipped to handle them. It's also worth noting that though it made an initial impact with excellent arcade conversions, the PlayStation came to be defined by games like *Final Fantasy VII*, *Metal Gear Solid* and *Gran Turismo* – longer games, games with cinematic ambitions, and games which opted for more muted colour palettes to strive for realism. Meanwhile, the N64 was offering expansive 3D worlds in *Super Mario 64*, *The Legend Of Zelda: Ocarina Of Time* and *Banjo-Kazooie*. These were the types of games that consumers came to favour and they were not abundant on the Saturn.

But it's similarly easy to see why there's still a great deal of affection for the Saturn. The Saturn is defined by games like *Sega Rally*, *NiGHTS* and *Virtua Fighter 2* – experiences drenched in colourful arcade flair, of the type rarely seen today. If you ever ventured into an arcade during the mid-Nineties, the Saturn is bound to host a number of your favourite games, and the system's strengths mean that it has a lot of excellent 2D games, many of which have aged better than the early 3D titles found on 32-bit platforms. The very fact that the Saturn offered such an alternative approach to gaming in the mid-Nineties is what makes it so worthwhile today – not only does it boast a line-up of great games, but those games are different enough to complement the other two platforms' offerings. Gamers of the Nineties might have thought Sega was on another planet, but today we can appreciate the Saturn for being worlds apart from the competition. *

ESSENTIAL SATURN IMPORTS

Darran Jones will argue that Sega's 32-bit console was built solely to play Saturn shooters, but plenty of other genres are also represented, from racers to RPGs



RADIANT SILVERGUN

DEVELOPER: Treasure **YEAR:** 1998

■ Everything about *Radiant Silvergun* is magnificent. Graphically it's spectacular with all sorts of fancy tricks that push the Saturn's hardware to its limits. Mechanically it impresses as well with a perfectly balanced weapon system, a colour coding scoring system – that would admittedly be refined in spiritual successor, Ikaruga – and some incredibly challenging bosses. Even a digital release on Xbox Live Arcade hasn't stopped copies of the Saturn original from selling for north of £100 on auction sites. An incredible shooter deserving of all its praise.

SHINREI JUSATSUSHI TAROMARU

DEVELOPER: Time Warner Interactive Entertainment
YEAR: 1997

■ Sadly, its insane price tag and sheer rarity will mean many will not have had a chance to experience *Shinrei Jusatsushi Taromaru* (or *Psychic Assassin Taromaru*). You're missing out on a delightfully nutty game that takes elements of *Shinobi* and *Alisa Dragoon* and marries them to insanely over-the-top action scenes that involve gigantic frogs and fantastic scaling and rotating effects. The difficulty is a little unfair in places, but the impressive visuals, inventive level design and stunning animation certainly makes up for it. If there's a better game where you can run across the backs of stampeding bulls, we've not played it.





MAGIC KNIGHT RAYEARTH

DEVELOPER: Sega, Working Designs **YEAR:** 1995

■ Based on the Japanese manga, *Magic Knight Rayearth* is easily the best playable import RPG, thanks to a highly entertaining localisation by Working Designs, its fun combat system (you effectively control one character at a time, switching between them tag-team style) and some delightful 2D visuals. Unfortunately, its late release (it arrived in 1998, three years after the Japanese release) means you'll be hard pushed to get it for under £100. While we're on the subject of RPGs we stayed away from the Japanese ones due to their general inaccessibility.

KONAMI ANTIQUES: MSX COLLECTION ULTRA PACK

DEVELOPER: Konami **YEAR:** 1998

■ There's a host of fantastic compilations on the Saturn, from Capcom's superb *Generation* series, to various *Sega Ages* releases. We're going to go for this solid effort from Konami, which took its three PlayStation compilations and packed them onto one disk. An impressive 30 games are included covering everything from *Yie Ar Kung-Fu* to *Gradius*. The quality is very good, while the presentation is also superb. Konami created some cracking games for the MSX, so this is a great way to experience them.



DAYTONA USA: CIRCUIT EDITION

DEVELOPER: Sega **YEAR:** 1997

■ Okay so *Daytona* is available in the West, but let us explain its inclusion here over the likes of *Gale Racer*. The original *Daytona* played well enough but looked a bit pants. *Championship Circuit Edition* was then released, which added two new tracks, a link-up mode and additional music. *Circuit Edition* goes that little bit further by adding the excellent *Daytona Medley*, the ability to alter the drift mechanics of your vehicle – which greatly alters the way the cars handle – and the option to race at different times of day. It's the definitive version of the best Saturn racer that isn't called *Sega Rally*.

BUBBLE SYMPHONY

DEVELOPER: Ving **YEAR:** 1997

■ There's a host of import platformers for the Saturn, from *Astal* to *Mizubaku Daibouken*, but we kept returning to this charming effort. Despite being released after *Rainbow Islands*, it's subtitled as *Bubble Bobble II*. Franchise confusion aside, it's a fantastic game and everything you'd expect from a 32-bit *Bubble Bobble* release. There are four different heroes to choose from, each with their own skills; bosses are far more plentiful; it's possible to charge your shots and there are often multiple routes to take. It's otherwise more of the same, which means it's amazing fun to play.



ELEVATOR ACTION RETURNS

DEVELOPER: Ving **YEAR:** 1997

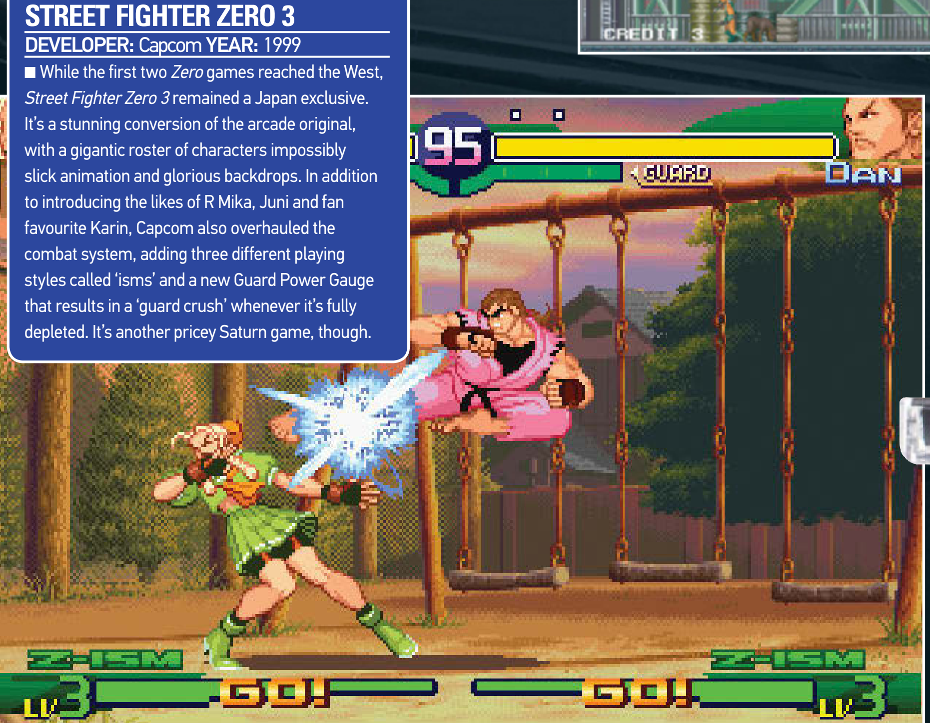
■ Taito's sequel to its popular arcade game was a marked improvement and particularly good on Sega's console. It's a wonderfully slick run-and-gun with gritty looking visuals, well-animated enemies and plenty of variety in its stages. It retains the same gameplay of the original but it feels much better to play thanks to tight controls and a challenging time limit that ensures you're always trying to reach red-coloured doors as quickly as possible. Other improvements include an excellent co-op mode, a vast array of new weaponry, the ability to throw bombs and the ability to explode oil drums to take out nearby enemies.



STREET FIGHTER ZERO 3

DEVELOPER: Capcom **YEAR:** 1999

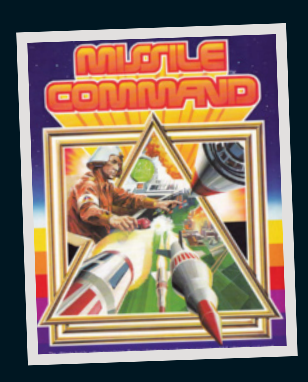
■ While the first two *Zero* games reached the West, *Street Fighter Zero 3* remained a Japan exclusive. It's a stunning conversion of the arcade original, with a gigantic roster of characters impossibly slick animation and glorious backdrops. In addition to introducing the likes of R Mika, Juni and fan favourite Karin, Capcom also overhauled the combat system, adding three different playing styles called 'isms' and a new Guard Power Gauge that results in a 'guard crush' whenever it's fully depleted. It's another pricey Saturn game, though.



THE MAKING OF

MISSILE COMMAND

Vivid nightmares, errant missiles and living under the threat of nuclear war were just a few of the obstacles that Dave Theurer and Rich Adam faced while creating Missile Command. Darran Jones investigates further…



IN THE KNOW

- » **PUBLISHER:** ATARI
- » **DEVELOPER:** DAVE THEURER
- » **PLATFORM:** ARCADE
- » **RELEASED:** 1980
- » **GENRE:** SHOOT-'EM-UP

Dave Theurer is not an easy man to get hold of. The genius behind such arcade delights as *Tempest, I, Robot* and *Missile Command* is fiercely protective of his private life; so much so, in fact, that it's taken eight long years of gentle coercion and downright pleading for him to finally commit to an interview about one of the industry's most iconic games.

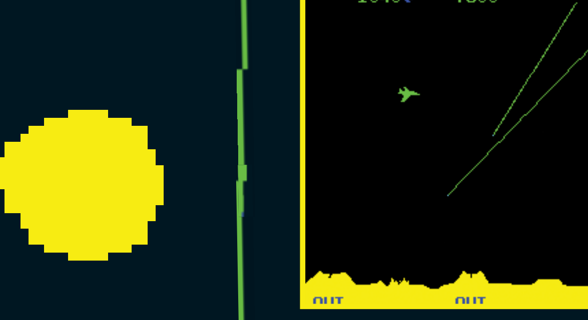
Still, when you consider the sheer pedigree of Dave's title, the long wait has definitely been worth it, with the precise controls and intense pressure the game offers remaining just as refreshing today as the first time you dropped 10 pence into it.

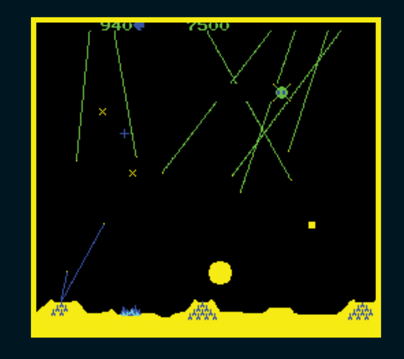
One of the most interesting facts about *Missile Command* is that while the gameplay mechanics are all Dave's, the concept itself actually came from higher up within Atari. "I remember my manager, Steve Calfee, told me to create a missile defence game wherein the player would defend against incoming missiles, which could be seen on a radar display," confirms Dave when we quizzed him about *Missile Command*'s origins. "We took it from there, tossed out the radar screen and added cities, missile bases and so on."

It's a somewhat inauspicious start for one of the most iconic games of the Eighties, but with the constant threat of the USSR and nuclear war being high on the agenda, it's hardly a surprise that the concept had germinated in the mind of Atari (coin-op) president Gene Lipkin.

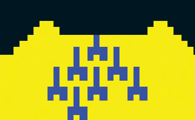
The bleak link became even more obvious when names were being thrown about for the new project, with *Missile Command* being just one of the possible choices. "Some of the names I recall included *Missile Command*, *Ground Zero*, *The End* and *Armageddon*," continues Dave. "There were various pro and con reasons given for each name suggestion, but recognition was a key concern. Lots of people don't know the meaning of 'Ground Zero' and 'Armageddon'. I don't recall being too bleak as a factor. As I recall, Gene Lipkin suggested the name *Missile Command*. There was a general consensus that that was a really good name, so we went with it."

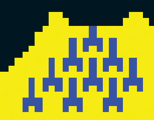
While the concept itself had been born from the Cold War threat, Dave didn't want to use *Missile Command* as an excuse to glorify something that, at the time, was considered a very real threat. "I wanted people to become aware of the horrors of a nuclear war. I didn't want to put players in the position of nuking entire cities, as entertainment, because it would desensitise them from such horrors," he explains. "However, a defensive position was

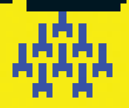






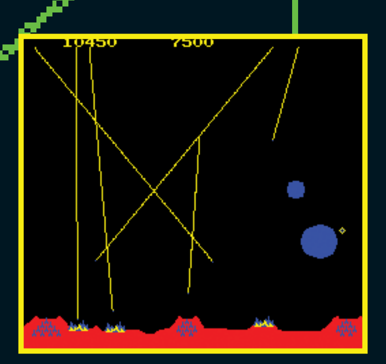








» The instruction manual for the Atari 8-bit. You just don't get artwork that looks like this anymore…



» [Arcade] Getting missiles to swerve around your explosions was one of the development challenges.

acceptable, since what's nobler than saving 10 million people from annihilation? The final lesson, though, is that nobody wins in a nuclear war, and that's why we have 'THE END' explode to fill the screen, after all the cities are gone."

It's something that Rich Adam, *Missile Command*'s junior programmer, also touched upon when we asked him about the potential controversy that *Missile Command* might have attracted at the time. "I didn't feel as strongly as Dave, but I certainly did not want to go into something that would simulate a true, aggressive World War III scenario," he begins. "We touched on it to a point, but our concept was always [that] we're blowing up pixels. It's an abstract, conceptual game. It was certainly in our collective minds, but it was not something that dissuaded us or diverted us from trying to make something fun."

Despite the general concerns that were connected to *Missile Command*, Dave, Rich and the rest of the team remained resolutely excited about the project. After all, this was the beginning of the videogame industry, and it was an incredibly exciting time for everyone involved.

"During the first few years, we felt like pioneers," recalls Dave with an obvious sense of pride. "There weren't many [video] arcade companies at the time. There weren't many game development tools either. We had to develop most of them in-house. I'm not sure we thought about it that much, though. Mostly we just thought about how we could make our games more fun to play."

It's a sentiment that Rich wholeheartedly agrees with: "It was an outstanding environment to work in and we were lucky because we were filling the void. Every idea was fresh and new and hadn't been tried before, and that was really fun. Nowadays it's very hard to come up with something novel and different."

" I didn't want to put players in the position of nuking cities as entertainment "

As with many of Atari's games, *Missile Command* was built from the ground up, meaning that Dave and the rest of the team didn't have the benefit of using an existing engine, something that is commonplace in today's industry.

"You were always bringing out new hardware in that day and age," explains Rich, "so that was one of the key difficulties faced with new projects." The constant creation of new custom-built technology also meant that there was a strong relationship between Dave and the rest of the hardware team while *Missile Command* was being created.

"The hardware designer designed the custom hardware just for this game," explains Dave about *Missile Command*'s early development. "He knew that the bottom portion of the screen needed more colours for the cities, bases, land, etc. No other game, except for a possible sequel, was planned for this hardware. The hardware designer, Dave Sherman, was excellent, and quickly came up with a design, which was wire-wrapped for development purposes."

It was at this point that we were keen to find out if any other system other than a trackball had been considered when *Missile Command* was first pitched. "My recollection is that it was going to be a trackball from the start and it never deviated from that," confirms Rich. "From the moment we implemented it, it was pretty obvious that the trackball was optimum."

"We were using trackballs in a lot of our other games at the time such as *Soccer* and *Football* before *Missile Command*," continues Dave. "It seemed like a good match, so a trackball was planned from the very beginning."

While the trackball easily made the transition from prototype to final games, other aspects of *Missile Command* weren't quite as lucky, with numerous ideas being dropped during the game's six-month development. "When I was first creating the coastline you were defending, I pathetically tried to create a Californian-looking coast that turned out to be awful-looking," recalls Rich. "Lyle [Rains] was the one who eventually came up with the fortress-looking cities that you had to defend."

The ability to blow up real-world cities, even if they were depicted by simple pixels, was soon ditched, which in turn helped distance the game from any possible real-life connections. There were plenty of other ideas that were tested, but they

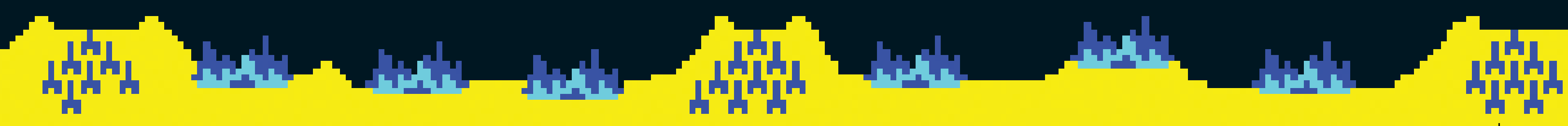
» [Arcade] Certain missiles will split out into multiple smaller ones. A well-timed explosion will wipe them all out.

A word from Lyle Rains

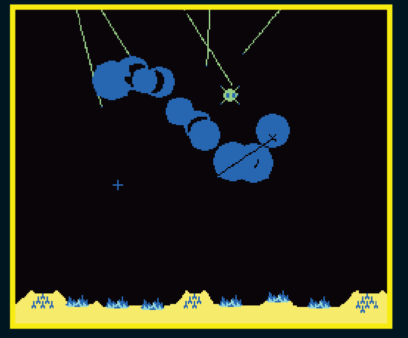
WE MANAGED TO speak to Atari's former senior executive about the popularity of *Missile Command*, and here's what he told us.

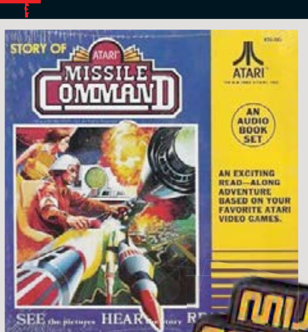
"Dave Theurer, as was also the case with *Tempest*, did a fantastic job of tuning the pacing of the game and making the controls responsive.

"Atari certainly did not shy away from battle simulations in our products, although we avoided direct bloody violence on human avatars and mobiles for about two decades. But the world in 1981 was still involved in the Cold War. The idea of nuclear holocaust on cities added an extra edginess to *Missile Command* that resonated with some folks as being a bit too close to home. One could speculate that, as part of the popular culture of the Eighties, *Missile Command* even had some subliminal influence on defence policy-makers, as they contemplated the so-called 'Star Wars' missile defence system. If they had actually played the game, they would have known that you always ending up losing."

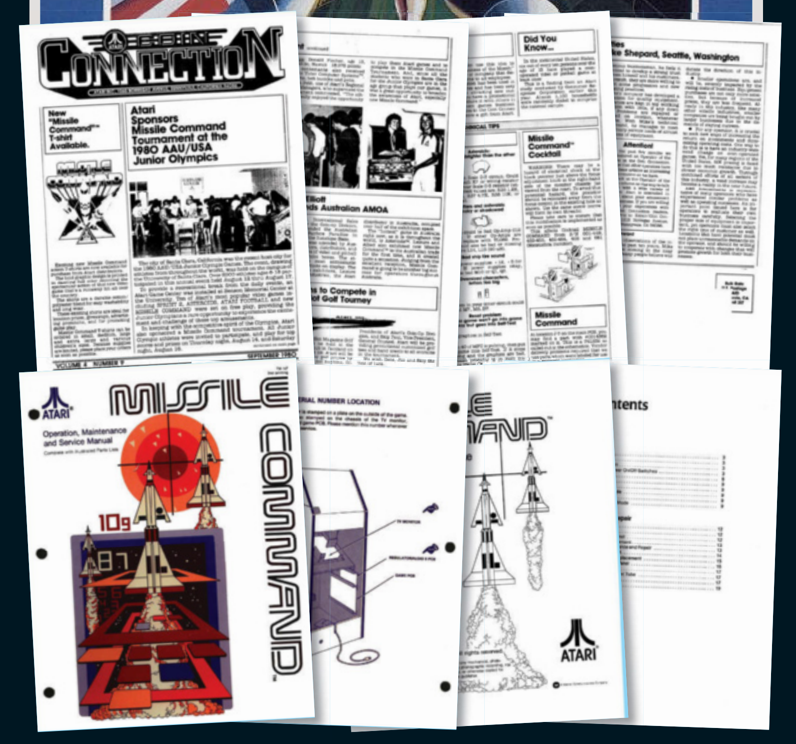


THE MAKING OF





» There was assorted memorabilia created for *Missile Command*, including an album, a collector's pin and even an audiobook set.

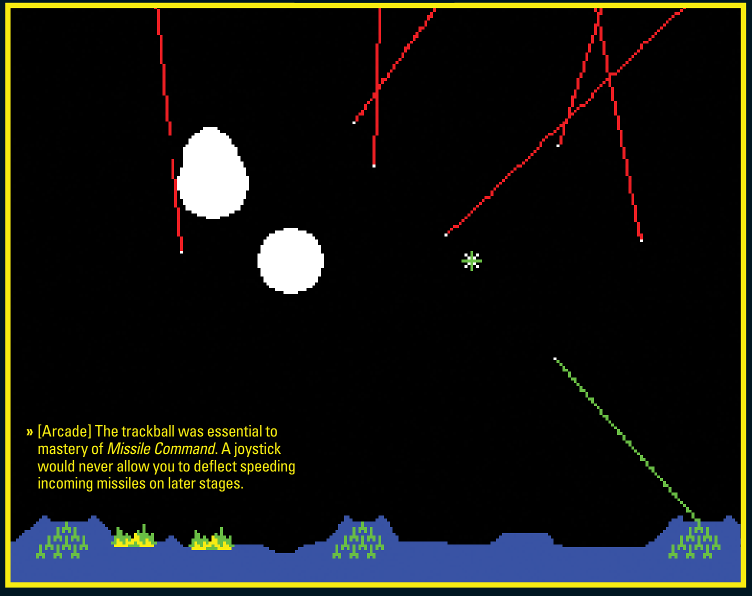


too quickly fell by the wayside. Dave reveals some of the other ideas that were implemented and goes on to explain why they were eventually ignored: "Submarines would pop up and shoot missiles, which didn't make sense, as every other threat was coming from the sky. Railroads hauled missiles between the cities and the bases, but it [was deemed] too complicated for players. There were programmable names for the cities, which made it more relevant for players in areas near the named cities, but less relevant for players out of the area, but it was too much work for operators to program in the cities' names. There was also a giant physical display above the monitor containing flashing lights, status indicators and other elements. It was too expensive, too hard to maintain – light bulbs too hard to replace – and too hard to play the game and watch this external display."

In addition to numerous gameplay changes, *Missile Command* presented plenty of technical challenges for the developers, many of which were being encountered for the very first time. "The entire program had to fit into approximately 12K and it was written in assembly language," recalls Dave. "We also had to come up with lightning-fast methods for drawing lines and circles in real-time so that motion would be smooth, and we were constantly working within the limits of the hardware: the narrow bottom section at the bottom of the screen for land, cities and missile bases had more colours than the rest of the screen."

Rich remembers how the large number of on-screen missiles and smart bombs that the game had to handle also ended up proving to be a problem for the trailblazing pioneers: "Dealing with the new hardware and making sure that it was up and running and good to go was hard enough, but in terms of development, creative and fun factor it was probably those smart bombs." He continues: "It was just their behaviour. I think a lot of what they did was targeted to a specific city, but they avoided and tried to go around and would use colour detect in their near region to decide if they were going to plough into a bomb or an explosion area. In that day and age we were trailblazing, but in today's world they are now trivial problems. Getting them to do the right thing and behave intelligently had less to do with time on screen and more to do with the avoidance of getting blown up."

Despite various kinks, Rich feels that the creation of *Missile Command* remained a fairly organic experience for the most part. "We did the original incoming missiles and that was cool but not enough, and so we added the satellites and the planes



» [Arcade] The trackball was essential to mastery of *Missile Command*. A joystick would never allow you to deflect speeding incoming missiles on later stages.



» [Arcade] Dave was keen that *Missile Command* didn't glorify nuclear war, using the end screen to explain that, in such a circumstance, everyone loses.

» Dave kindly supplied us with this image of the original top that was considered for *Missile Command*. The expense and maintenance of the lights coupled with the distraction it caused meant it was quickly dropped from the final game.

and the things that dropped them. That was more and better but maybe not quite enough, and so we added MIRV missiles, and that was more and better but not quite enough, and then we added smart bombs and that turned out to be enough. And that's really the kind of evolution of how games are created. You take the core of what you're doing, you make that and see if it fits. It was such a simple concept, and the additions that we made were so simple, that it became one of those games were everything kind of fell into place."

With a prototype finished, it was time to put *Missile Command* on its all-important field test. This was a crucial time for any new game, as the amount of coinage that was pulled in would always decide if there was any point in finishing the project. Even before the field test, though, Dave was convinced that they had a hit on their hands: "I'd be asking co-workers to step back from playing the development prototype so I could work on it," he recalls. "That's when we knew that the game would be a winner."

Rich was also pleased with the field test, and, like Dave, he was convinced that they stood a far better chance than other games. "You have to realise that this was one of the first colour games, so it had this gigantic advantage over all its competition," he begins. "I remember some young guy who was probably in the military. He was looking at the game and he had simplified technology into thinking that everything was simply a new chip. He had this unabashed excitement and enthusiasm and was like, 'Oh, man. Look what's in that new chip!' His reaction on test was basically saying: 'Look what technology is bringing to me.'"

"Dave Theurer suffered from regular nightmares about nuclear attack for several months"

After its successful field test, *Missile Command* rolled out into arcades, quickly going on to become a massive success for Atari; although the game's gruelling schedule did leave its mark on Dave, who suffered from regular nightmares about nuclear attack for several months during and after the game's development. Despite those nightmares, Dave remains incredibly proud of his work on the game. "I had a very strong feeling from the very first day when Steve Calfee gave me the assignment to do a missile defence game that the game would be one people would want to play," he admits. "We saw co-workers' excitement with it when they came into the lab to play it during development. We had developers from the Atari VCS system that would drop by – they were in the same building – and play it for hours in our lab. We saw the players' excitement when we put it out on its first field test. We saw great collections in all the field tests. It was a very positive experience from start to finish."

Rich is also pleased with the way the game turned out, citing the power it gave you as one of the reasons for its enduring success. "It's a good feeling to have total control over an incredibly complex machine," he explains. "To have a machine give you that ego gratification of controlling such a complex piece of equipment for a quarter is a hell of a bargain. People crave power and ego is fed by that, so that's what we were selling and, to a degree, what videogames continue to sell."

Special thanks to Dave Theurer and Rich Adam for their precious time, Martin Goldberg for additional advice and pictures, and to Paul Drury for making an eight-year quest finally come to fruition.

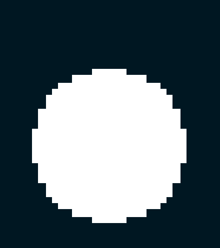
Incoming missiles. Abort, abort

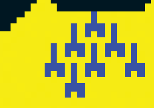
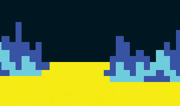
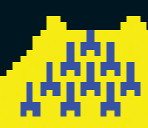
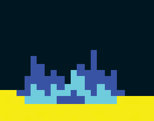
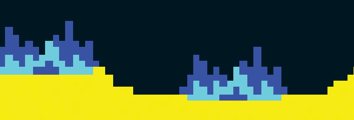
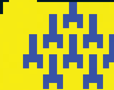
MISSILE COMMAND WAS a huge success for Atari, so it should come as no surprise to learn that a sequel was soon in development after the original's runaway success. Having cut his teeth on the original game, it was Rich's turn to shine as the game's creator. Unfortunately for him, the original sequel hit a number of key issues, meaning it never reached the arcades, a pity, as his description of it fills us with excitement at what might have been.

"It was simultaneously two player," he begins about the now long-dead sequel. "We turned the monitor on its side and tried to get a two-player version of the game up and running, where you attacked each other. It was a really challenging concept, but it just wasn't as fun to multitask – at least I couldn't get it to be fun – and try and go over and launch accurate missiles at opponents, while playing defensively against launches from another player.

"I think the main issue with *Missile Command 2* was that the computer launches could be way more efficient and rapid about laying down missile launches, as opposed to humans who had to manipulate the trackball. In that sense it was difficult, and people were so satisfied with the way that the mechanic of *Missile Command* worked that it just didn't do much. I never solved the design for using two players simultaneously, and I just could not make it fun. The screen real estate was another issue, as you actually had a smaller, narrower area to defend. That was my game and we eventually killed it because it just didn't earn. When you started a project you knew that there was a 50 per cent chance that it was never going to get to production. It was a really competitive environment, though, and I wanted to make something really cool. I wanted to have the next big hit game for us."

Sadly, with *Missile Command 2*, it just wasn't to be.



GAMING'S BIGGEST DISASTERS



The games industry is full of success stories, but there are just as many games, consoles and peripherals that failed to do the business. Nick Thorpe and Darran Jones look at some of gaming's biggest disappointments

Think of failure in videogames and Nintendo's Virtual Boy is often the first thing that people think of. Despite its short lifespan and inability to reach Europe, gamers know that it was a failure for Nintendo, proving that even the touch of Gunpei Yokoi didn't always translate to commercial success.

But what are we really talking about when we use the term 'disaster'? Money (or lack of) is often a big clue to something's success and it should come as no surprise to learn that many of the systems, games and peripherals that we'll be covering here fall into that category. Companies like Philips spent millions flogging dead horses like the CDi, while the financial state of Atari is well documented.

Money is an easy way to determine a disaster but it's not always accurate. Look at *E.T.* and *Pac-Man*, two Atari 2600 games that sold well, but were universally panned. One of THQ's failings was that it put too much faith into its uDraw tablet and even a pink dildo-wielding Jason Rubin couldn't save it from financial ruin.

And let's not forget devices like the Super Scope, Power Glove and joysticks that are just too useless to use, making you question why anyone would consider inventing them in the first place. The same could be said for companies that thought it would be a great idea to mark a game's launch with the sacrificing of a goat, or humiliating an ally, which in turn led to one of the biggest blunders in gaming history.

Join us, then, as we highlight some of the many atrocities that have been caused in the last 40 years of gaming. And if you don't see your favourites included, write in to **retro.gamer@imagine-publishing.co.uk**, we'd love to hear from you.



KEY

- FINANCIAL
- TIMING
- UNHAPPY USERS
- BAD PRESS
- CRITICAL
- BROKEN
- BAD SALES

"Companies like Philips spent millions flogging dead horses like the CDi"



POWER GLOVE

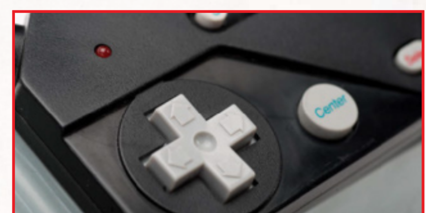
MANUFACTURER Mattel **YEAR** 1989



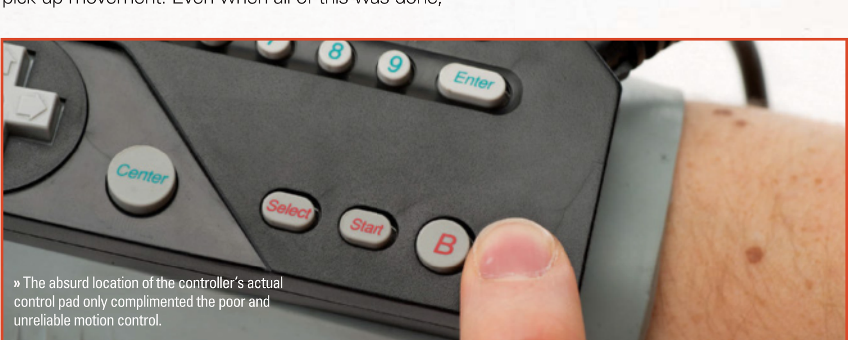
Hardware failures don't really come any more iconic than the Power Glove. Designed by Abrams/Gentile Entertainment and manufactured by Mattel in North America, this motion-based controller for the Nintendo Entertainment System looked set to revolutionise the way we interacted with video games, but ended up in bargain bins shortly after its release. The magnitude of its dismal performance is matched only by the staggering amount of hype that preceded its launch. It famously featured in the 1989 movie *The Wizard* and ignited the dreams of millions of gamers, who blindly assumed that this peripheral would make them as skilled as the suave video game expert who brandished it. In the real world, it was inaccurate, awkward and disastrously under-supported. [redacted] "The Power Glove utilised cheap technology and clever engineering to accomplish feats that, at the time, could only otherwise be accomplished with robotic tech costing upwards of $10,000," explains Adam Ward, part of the team behind Power Glove documentary *The Power Of Glove*, set for release this year. At the time, the peripheral was nothing short of revolutionary. "The Power Glove's precursor, the Data Glove, had been designed with clients like NASA in mind, so it was able to implement the latest and most expensive tech without concern for going over budget," continues Andrew Austin, who also worked on *The Power Of Glove*. "The Power Glove, on the other hand, was a peripheral that had to sell for under $100 in 1989, and despite that, it was able track your hand's position in 3D space, determine the tilt of your hand and sense your different fingers' bending motions in an impressively wide range." [redacted] Despite the interest in the Power Glove and the technology that it utilised, the peripheral was not a success. Getting it to function with existing NES games was a cumbersome affair that involved tapping in a seemingly endless number of inputs on the controller's button pad, and the device required users to rig up a complex sensor array in order to pick up movement. Even when all of this was done, performance was erratic and many users simply gave up. To make matters worse, only two games – *Super Glove Ball* and *Bad Street Brawler* – were released that used the device specifically. "Since it had to be retroactively programmed to function with games that already existed, it would often underperform when compared to the NES controller, which was frustrating for gamers who bought the Glove thinking it would make them the masters of time and space," states Andrew.

Adam believes that the Power Glove's lack of success may even have put the games-playing public off the idea of motion control altogether – at least for a short time. "It could be accused of 'poisoning the well' for a lot of gesture-based videogaming projects for nearly 15 years," he admits. However, the irony is that the low cost of the Power Glove and its functionality could also be cited as reasons for the intense surge of interest in motion-





» The Power Glove may have looked futuristic, but it certainly wasn't fun to use and is best considered a bizzare curio piece now.



» The absurd location of the controller's actual control pad only complimented the poor and unreliable motion control.



> "It could be accused of 'poisoning the well' for a lot of gesture-based videogaming projects"
> Adam Ward

control from the hacking community, who tore it apart and utilised it in early VR experiments in the Nineties.

It's unusual that a device which flopped so dramatically and failed to fulfil its role should become such a legendary name in video gaming. Andrew believes that the Power Glove's fame is largely down to the fact that it personified an entire era. "The reason the Power Glove has become so iconic is really twofold," Andrew explains. "The first aspect is that the design and marketing has come to really embody the spirit of the Eighties. The Eighties were an era in which people looked to the future as something that would be big and bold – a future of strength and power. People latched onto the Power Glove because it was a representation of this strange alternate future where people zip around in Ferrari Testarossas and talk on cellphones the size of bricks. Another aspect is that the Power Glove also represents a sincere form of optimism, something which gamers can still relate to. It showcased a vision of humans reaching out and interacting with games and computers with just the flick of our hands. Despite not living up to its own hype, the Power Glove was still one step closer to bringing us to a reality in which we can explore virtual worlds. When we see that companies like Oculus VR are still exploring similar dreams, it is no wonder that the Power Glove has come to represent a prophetic vision for the future," Andrew concludes.

GAMING'S BIGGEST DISASTERS

» It may have stood apart from other lightguns, but the large size made Nintendo's peripheral unwieldy to use.

58.4cm

29cm

GUN LENGTH

SUPER SCOPE

MANUFACTURER Nintendo **YEAR** 1992

Lightguns have been a staple accessory since the introduction of home consoles. As such, by the late Eighties every console manufacturer offered one: Atari's XG-1, Sega's Light Phaser and Nintendo's NES Zapper. Nintendo's offering had been particularly popular, forming a key part of many console bundles alongside its most fondly-remembered title, *Duck Hunt*. However, by the early Nineties no major console manufacturer had introduced a lightgun for its console.

Nintendo was the first to market with its Super Scope, a lightgun unlike any that had been seen before. For a start, instead of tethering the player to the console with a cable, the Super Scope was a wireless lightgun which relied on an infrared signal to communicate with the SNES. Additionally, where previous lightguns had been shaped like pistols or rifles, the Super Scope was designed like a bazooka with a shoulder rest and top-mounted fire button. The Super Scope debuted in North America with a bundled six-game cartridge, at a price of $59.99. [redacted] The Super Scope's unique design features were its undoing. The bazooka-style design ensured that the Super Scope was much larger than existing lightguns, and the placement of the fire button on top of the device was awkward for fast-paced games. Worse yet, the wireless design meant that it required six batteries to operate, adding a long-term cost to ownership.

The Verdict

The Super Scope probably wasn't a financial disaster for Nintendo and it did push Sega into sinking money into the Menacer as a response. For players, though, the Super Scope was an unwieldy beast and even those that enjoyed it were left with little to play, with only eight dedicated gun games following its release and a couple more offering bonus support.



Q&A STE PICKFORD

We pick the brains behind one of the few Super Scope classics

Why do you think Nintendo went for a bazooka design?

No idea to be honest, I guess they just thought it was cool. I remember thinking it looked good at the time, if a bit silly. Nintendo has always been in the plastic toy business, so perhaps it's not such an odd design for them really.

Why do you think so few developers created games for it?

The same reason why nobody ever makes games for peripherals: unless the peripheral maker pays them to. Making a game for a gaming peripheral limits your market to only those who have bought the peripheral, and it also makes it difficult to convert the game to other platforms.

Why did you make *Tin Star* compatible with the device?

Contractual obligation! Nintendo hired us to make a Super Scope game for them. Third parties weren't particularly making games for it, so Nintendo had to make one or two games itself. We'd just finished *Ken Griffey Major League Baseball* for Nintendo, which was a success in every respect. We really should have got the contract to make the sequel, but due to behind-the-scenes politics that went to Rare instead, and I think Nintendo felt a bit guilty and so it gave us a contract to make a Super Scope game as a sort of consolation prize.

The great thing about the project was that nobody at Nintendo was especially interested in it. It didn't matter to anyone, it was just a tick box Super Scope title. That meant we had more freedom than usual to design and make the game we wanted, so we got away with quite a radical art style and a really funny script, while also against anyone's expectations, making it a really good game.



LOSING CONTROL

Four controllers that weren't fun to use

ATARI 5200 CONTROLLER

■ Atari ■ 1982

Atari broke the general convention of self-centring joysticks, making the 5200 controller a pain to use and earning the ire of players. Worse yet, the device was prone to breaking down prematurely.

EXPORT SATURN CONTROLLER

■ Sega ■ 1995

Sega's redesign of the standard Saturn pad for Western audiences turned a classic design into a bulky mess, failing the 'If It Ain't Broke, Don't Fix It' test rather spectacularly.

JOGCON

■ Namco ■ 1998

This PlayStation controller featured an integrated force-feedback wheel that might have seemed like a relatively good idea at the time, but its users generally preferred Namco's older NeGcon controller, plus the Jogcon is only compatible with two games.

MASTER SYSTEM CONTROL STICK

■ Sega ■ 1987

We've never been quite sure why Sega, as one of the world's foremost arcade manufacturers, would release a backwards arcade stick that only Ned Flanders' Leftorium would want to stock.





ROB

MANUFACTURER Nintendo **YEAR** 1985

An appealing little robot, bundled with the NES Deluxe Set in order to play games with physical pieces.

THE VERDICT: As far as Nintendo is concerned, ROB was a massive success. Its inclusion in high-end NES bundles was basically a Trojan Horse technique which allowed the company to market the system as an electronic toy, rather than a videogames console – a product then seen as toxic by North American retailers. However, the lack of long-term support for ROB has become legendary amongst gamers as the two games that accompanied ROB at launch, *Stack-Up* and *Gyromite*, were the only ones ever made. The coolest thing in the box sadly looks rather less cool when covered in a thick layer of dust…

MIKRO-PLUS







MANUFACTURER Mikro-Gen **YEAR** 1985

This Spectrum add-on contained a 16K shadow ROM and a joystick port, which Mikro-Gen claimed would give a new dimension to depth of gameplay, with 50% bigger and better games. [redacted]

THE VERDICT: Trailed for months with ads that showed no game content, the Mikro-Plus promised big things but delivered underwhelming results. *Shadow Of The Unicorn* was the first (and only) game to use it and scored well with the press, but was recognised as nothing groundbreaking. However, thanks to a high price of £14.95 and WH Smith's decision not to stock the game it didn't come near recouping Mikro-Gen's £130,000 investment, and plans for other Mikro-Plus games were cancelled. We can't blame anyone but Mikro-Gen for this one – the lessons were there to be learned from Imagine and *Bandersnatch*. [redacted]



© Mark R Jones

CHARACTERISTICKS



MANUFACTURER Cheetah **YEAR** 1992

A line of joysticks for a variety of computer and console platforms, modelled on popular TV and film properties such as *The Simpsons*, *Batman* and *Alien*.

THE VERDICT: It's worth applauding Cheetah for trying something innovative in marketing controllers – a relatively un-sexy area of hardware. They seemed to have sold through a fair few of these, too, judging by the fact that they're not too hard to find online. Unfortunately, using any of the designs was an unpleasant experience due to the fact that they were created for marketing rather than comfort. We have to single out the *Alien* model as one of the least comfortable joysticks ever made.

E-READER

MANUFACTURER Nintendo **YEAR** 2001

A card scanner for the GBA, letting the machine to read data in the form of dot patterns. NES games, add-ons and more were distributed this way.

THE VERDICT: While it was popular in Japan, audiences elsewhere were rather less taken with it. Each strip of dots holds only 2.2KB of data, meaning that even small games spanned multiple cards. If you wanted to transfer add-on data to a game, such as the extra levels for *Super Mario Advance 4*, you needed an additional GBA and a link cable. The device was discontinued after a couple of years in North America, and never actually made it to Europe at all.







Q&A JOHN ROMERO

The creator dredges up the past

Do you agree with the harsh reviews that *Daikatana* received at the time?
No, the press really attacked the game because of Ion Storm's image ads run in 1997, then the 'Bitch ad' that followed, and the game took three years to make but it was advertised the year it was started. A major mistake of mine was to hire an entire team of passionate modders, really great people, who had never made a game before in their lives. It was a big experiment that blew up on me.

Whose idea was it to have the 'Romero's about to make you his bitch' line?
I'm sure you'll be surprised at this one. On the *Quake* packaging project was a woman named Sasha Shor who designed all the packaging, CD printing, the *Quake* Font, ads, you name it. When I started Ion Storm I naturally wanted to keep working with her so we signed up with her company, Industry Media. Mike Wilson wanted her to be really edgy and one of the ad concepts she came up with was the Bitch ad. Yes, a woman created the Bitch ad. Mike showed me the ad and I told him I would never say something like that. He said it didn't matter and that it was edgy and he wanted to run with it. Bad judgment on my part.

What were the biggest problems you faced from a technical point of view?
The biggest tech problem on *Daikatana* was that we were waiting for the delivery of the *Quake II* source code to be released to us in early 1998, and all our code would have to be refactored into the new engine. It turned out to be a much, much bigger task than we estimated. But really, the problems we had making *Daikatana* were people problems. Technology wasn't really an issue.

In hindsight what would you have done differently with the development?
I would have started Ion Storm with just Tom Hall and me. Everything else would have happened differently. It was a huge lesson for me, and I'm surprised that 15 years after *Daikatana*'s release that people still remember it as if it's still a big deal. For years now the only mail and messages that I have gotten about *Daikatana* are from players that still absolutely love the game.



» [N64] *Daikatana*'s companions were promoted heavily, but were stripped back for the console release.

DAIKATANA

MANUFACTURER Kemco **YEAR** 2000



Great things were expected of Daikatana. Wait, not just great things, *impossible* things.

After all, it was being created by John Romero, a talented coder who had found fame at id Software and was riding high on the success of *Wolfenstein 3D*, *Doom*, and the recently released *Quake*. What could possibly go wrong? Is *Daikatana* one of the worst games ever made? No, of course not, but it is easy to see why it has been so reviled over the years, particularly the Nintendo 64 version, which feels like a seriously cut down version of the original PC game.

Like many high profile games, *Daikatana* quickly became a victim of its own hype. It was heavily promoted by John Romero, who had recently left id Software and wanted to tell the world about his exciting new project. Gamers were excited about *Daikatana* and understandably so, but numerous delays began to cost the game dearly. A controversial ad that stated 'John Romero's about to make you his bitch' did little to fuel the patience of gamers, and by the time Ion Storm received the *Quake II* engine, it realised it was falling further behind. Numerous E3 showings did little to convince the gaming press, and when *Daikatana* was eventually released (some three years after its original release date) it received numerous negative reviews, particularly on the N64.

Daikatana's uninteresting level design, weak AI and ugly visuals are clear indicators of the game's overall quality, but it's also filled with plenty of interesting, if poorly executed, ideas. There was a significant amount of hype about your main character's AI companions during development, but while they made the eventual PC release, they were cut completely from the N64 version, only appearing in cutscenes. Add in fiddly controls, sloppy presentation (try looking at what it says when you invert the controls) and large amounts of fogging and it is little wonder that the N64 version was so poorly received.

Luckily, the Game Boy Color version of *Daikatana* was given a complete overhaul and is essentially a top-down dungeon crawler. Styled on the likes of *Zelda*, it's a highly enjoyable little adventure games that's certainly worth exploring if you've never heard of it before.



» [N64] The muddy textures added little to the game, while the high resolution mode hampered the frame-rate.

SONIC THE HEDGEHOG

MANUFACTURER Sega **YEAR** 2006

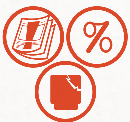


Sega's first attempt at a seventh generation *Sonic* game introduced Silver The Hedgehog, some mild bestiality and arguably the worst 3D outing for the popular mascot to date. [redacted]

THE VERDICT: Resident *Sonic* fan Nick Thorpe has completed *Shadow The Hedgehog* 11 times but he's never managed to stomach finishing Sonic's first HD game. "Putting aside the bizarre creative direction that had Sonic kissing a human princess, the game just wasn't finished and has hundreds of bugs to show for it," he says. He's right as well, as *Sonic The Hedgehog* is a dire mess of a game and arguably the low point of the series so far. Glitchy visuals; horrible controls; a terribly erratic camera; numerous bugs and a terrible new character in the form of Silver will ensure it remains hated for some time to come. [redacted]



RISE OF THE ROBOTS



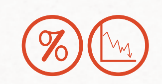
MANUFACTURER Time Warner **YEAR** 1994

Mirage's game was going to redefine the beat-'em-up genre and even featured a soundtrack by Queen's Brian May. Can you guess what actually happened? [redacted]

THE VERDICT: Aside from its impressive pre-rendered visuals there is nothing good about *Rise Of The Robots*. It features everything you hate to see in beat-'em-ups, including generic characters, stilted animation, an over reliance on a single move, dodgy collision detection and woeful, unchallenging AI. "It was not the most pressured project I have worked on," artist Sean Naden told us in issue 43. "Ironically, this was largely due to lack of experience within the overall team. Time Warner should have been kicking our arses, but we were left to our own devices."

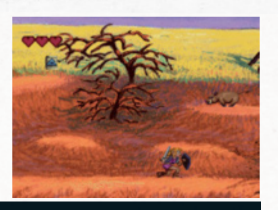


ZELDA CDI GAMES



MANUFACTURER Philips Media **YEAR** 1993

Nintendo's made a great many *Zelda* games, but you won't find them proudly displayed on Nintendo UK's *Legend Of Zelda* hub. There's a valid reason why… [redacted]



THE VERDICT: *Zelda* fans have little love for Nintendo's *Zelda* CDi releases. There's no denying that they are poor games compared to the rest of the series, due to their poor controls, poorly structured level design and overall pacing, but aesthetically they're rather pleasing.

"We had been aware of the criticism following the release of the games," creator Dale DeSharone admitted to us in issue 27. "I can understand that people were disappointed. Given the time we had, I thought we did a good job." [redacted]



E.T. THE EXTRA TERRESTRIAL

MANUFACTURER Atari Inc **YEAR** 1982



Everyone knows the story of *E.T.* as it's one of gaming's most famous urban legends and was recently the subject of a Microsoft documentary. Is its tale of woe deserved though? [redacted]

THE VERDICT: The odds were always stacked against Howard Scott Warshaw's game. The talented coder was given just under six weeks to complete a game that would tie in with the incredibly popular movie. The end game, while poor, is nowhere near as bad as many will have you believe, and it managed to sell over 1.5 million copies, an impressive figure until you realise that Atari had ordered 4 million units. As with *Pac-Man* (which just missed our list) Atari had overestimated the popularity of Warshaw's game.

[redacted] "From a developer's standpoint it does not deserve a bad [redacted] rep, Howard tells us. "I stand stridently by *E.T.* as the best five-week game ever done for the VCS." [redacted]

DON'T FORGET THESE

More games that are best avoided

FINAL FIGHT STREETWISE

■ Capcom ■ 2006

Created by an internal American team at Capcom, *Streetwise* was a woeful attempt to bring the classic 2D series into the third dimension. We're still raw just thinking about it. Even the mini-games are crap.

DARK CASTLE

■ Electronic Arts ■ 1991

While the original Mac version was decent enough, the Mega Drive offering is a real atrocity, with hideous visuals and terribly clunky controls. An astonishingly bad game.

SUPERMAN 64

■ Titus Software ■ 1999

One of the N64's worst games with a Game Rankings aggregate score of 22.90%. Terrible visuals, monotonous gameplay, unresponsive flying controls and numerous bugs all kill it.

BUBSY 3D

■ Accolade ■ 1996

To think this garbage actually came out *after Super Mario 64*. Ugly graphics, an awful camera and twitchy controls all combine to create a stinker.

WORLD CUP CARNIVAL

■ U.S. Gold ■ 1986

It may have featured a big box and nice extras, but this cynical release from 1986 was simply a repackaged version of the terribly received *World Cup Football*.



© Mark R Jones



EYES

■ The fatigue associated with playing the Virtual Boy can be partially alleviated by setting focus and interpupillary distance correctly. Even so, all games offer an auto-pause function to protect users' eyes.

RUBBER EYED

■ While essential to experience the full effect of Virtual Boy games, the rubber eye shroud makes playing the system a uniquely anti-social experience, fully excluding the possibility of any spectators.

GAMES RELEASED BY DATE

TWO D-PAD OR NOT TWO D-PAD

■ The Virtual Boy controller offers two D-pads. This was intended to allow the player to move in 3D space, but was more commonly used to flip controls for left-handed players.

STAND BY ME

■ The system's stand sits at a fixed height and only offers an adjustment for tilt. Even when sitting at a desk, many users must hunch uncomfortably to get their face into position.

BATTERIES

■ The Virtual Boy is powered by six AA batteries, which are kept in the control pad. This increased the size and weight of the controller, further discouraging long play sessions.

VIRTUAL BOY

MANUFACTURER Nintendo **YEAR** 1995



During the early Nineties, there was a widespread belief amongst console manufacturers that the next big technological shift for videogames would be away from traditional television displays, and towards virtual reality devices. Sega and Atari worked on headsets for the Mega Drive and Jaguar respectively, but their efforts failed to progress beyond the prototype stage. Nintendo, on the other hand, was able to release its device. Designed by Nintendo R&D1 under the supervision of Game Boy inventor Gunpei Yokoi, the device took the form of a headset which Nintendo promised would draw players into "their own private universe." [redacted]

■ The internal technology of the Virtual Boy was relatively clever, generating a convincing 3D image with a single LED row and an oscillating mirror for each eye. However, only red LEDs were used due to cost concerns – meaning that the device could only display red on black. Games were driven by a custom version of the NEC V810, a 32-bit CPU which also powered NEC's PC-FX home console, which granted considerable 2D power but limited ability to work with the type of 3D games which were becoming popular in arcades and on newer consoles. [redacted]

■ The Virtual Boy launched on July 21st 1995 in Japan, and a few weeks later on August 14th in North America, and enjoyed a unique market position – too large and fragile to be considered portable, but able to operate anywhere thanks to its built-in display and ability to use batteries. The price point was similarly ambiguous, with the system launching at $180 in North America – more expensive than 16-bit consoles and existing handhelds, but less expensive than the recently launched Saturn and the forthcoming PlayStation. *Mario's Tennis*, *Galactic Pinball*, *Red Alarm*, *Teleroboxer* and *Panic Bomber* accompanied the Japanese launch, while North American audiences got the same minus *Panic Bomber*. [redacted]

■ Nintendo faced enormous difficulties in marketing the Virtual Boy, in part due to the fact that its unique 3D visuals were impossible to display via print and TV advertising. The company advertised heavily with NBC and made a rental deal with Blockbuster in an attempt to combat this, which generated 750,000 rentals in the USA but failed to sell many players on the device. It's not hard to see why – the console's best games were possible in 2D. Worse yet, the device was physically awkward, causing players to report eye pain, and headaches and even feelings of sickness. [redacted]

> **"The device was physically awkward, causing many players to report eye pain"**
> The Virtual Boy was far from perfect…

The Verdict

The Virtual Boy was an unmitigated disaster for both Nintendo and players. Nintendo had sold only 770,000 units by March 1996, falling well short of its stated target of 3 million hardware sales. The machine was quietly killed as a result, with only 22 games released for the machine. Ultimately, that was a fate it deserved. While some high quality games such as Virtual Boy *Wario Land* and *Galactic Pinball* are included in that number, even ardent defenders of the machine have little to play – and that's if they can even do so, as no machine can match the Virtual Boy's fearsome reputation for being physically uncomfortable to play.



» [Virtual Boy] *Wario Land* is a key reason to play the system – an excellent platformer exclusive to the Virtual Boy.



» [Virtual Boy] Games like *Teleroboxer* featured convincing 3D effects, but were similar experiences to existing 2D games.

MOBILE MISFORTUNE

Four handhelds that were doomed to failure

GAME.COM

■ Tiger Electronics ■ 1997

Despite its high-profile licences such as *Sonic The Hedgehog* and *Resident Evil*, the act of actually playing a Game.com is masochistic as the dreadful screen turns everything into a blurry mess. It admittedly had some nice ideas, including being able to go online and using a touchscreen, but it was still rubbish.

NEO GEO POCKET



■ SNK ■ 1998

SNK's powerful monochrome handheld might have had a decent chance to succeed, had it not launched against the popular Game Boy Color. The system was replaced by a colour successor within five months, making it an extremely short-lived console.

N-GAGE



■ Nokia ■ 2003

The Finnish mobile phone manufacturer correctly predicted that mobile phones would become a popular gaming platform. However, its own gaming phone was scuppered by a high price and a lack of quality exclusive games, as well as questionable design choices including the infamous decision to locate the speaker and microphone on the side of the device.

GIZMONDO



■ Tiger Telematics ■ 2005



Originally announced as the GameTrac, this handheld was intended to provide parents with peace of mind thanks to its GPS tracking function. The system was discontinued just 11 months after its launch when its high-spending manufacturer Tiger Telematics went bankrupt, amid allegations of criminal activity amongst some company executives.



JAGUAR

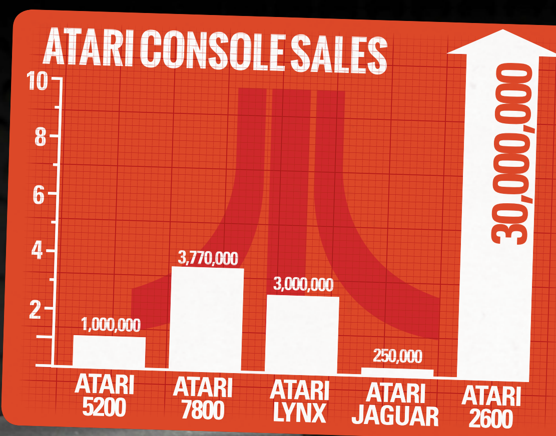
MANUFACTURER Atari **YEAR** 1993



Faced with the falling sales of its 7800 console during 1989, Atari was looking to release a new home console. However, the leader of the project had left the company and Atari sought the help of Flare Technology in order to finish the job. However, Flare's Martin Brennan argued that the existing project would soon be outdated as 3D graphics were the future, and that its Flare Two technology would be a better basis for a console as a result. Atari was convinced, and began the Jaguar project. [redacted] As work on the new console progressed through the early Nineties, Atari's existing Lynx handheld and ST computer range both experienced declining fortunes and were discontinued. Now rapidly shrinking, Atari had to go all-in on the Jaguar and launched the machine at a low price point of $249.99 while aggressively promoting it as the first ever 64-bit console, proudly comparing its specifications to those of competing consoles from Sega, Nintendo and 3DO. A soft launch began in late 1993 in New York and San Francisco, accompanied by the games, *Cybermorph* and *Trevor McFur In The Crescent Galaxy.* [redacted] Underwhelming launch [redacted] software dented the machine's reputation, but even if consumers were won over they would have struggled to buy one – supply problems stalled the Jaguar's progress until mid-1994. Meanwhile, many developers failed to utilise the machine's powerful hardware, instead porting existing 16-bit titles. The emergence of more powerful systems from Sega and Sony in late 1994 was the final nail in the coffin. [redacted]

The Verdict

While hardware bugs and supply problems played some part in the Jaguar's downfall, its biggest problem was the perception that it didn't have any good games. That's not true, as fans of *Tempest 2000* and *Alien Vs. Predator* will emphatically attest, but it certainly didn't have *enough* high-quality software – and that is a situation that Atari and Atari alone can be blamed for.





Q&A
JEFF MINTER

The Tempest 2000 designer offers his thoughts on Atari's doomed final console

Why do you think Atari's Jaguar is so maligned by gamers?

I think many people feel that the system promised too much and delivered too little, which is true to an extent – the advertising was all full of shouting about 64-bits and 'do the math' and all that, but remember that was just the latest round of a kind of stupid spec-based marketing bollocks that had been employed throughout the previous console generation – remember those 'Blast Processing' claims from Sega?

What do you think Atari could have done for the console to fare better?

Well, for one they could have had better launch titles. What did they have, *Cybermorph* and *Trevor McFur In The Crescent Galaxy*? *Cybermorph* wasn't a terrible game, and it was a pretty good tech demo of pushing a decent amount of Gouraud-shaded polygons for each frame. *Trevor McFur* was a pretty good tech demo of the sprite subsystem of the Jaguar, but it just felt a bit rubbish to play. So what they had at launch were two games that were quite impressive tech demos but which weren't necessarily that great to play, and I think that may have hurt the launch a bit.

Also, bear in mind that this was Atari trying to stage a comeback against the Japanese consoles and they basically left all their big guns in that fight out of the battle. They still had the rights to some of gaming's most distinguished IPs and if they had launched with fantastic updated versions of, say, the likes of *Asteroids*, *Defender*, *Missile Command*, *Star Raiders*, *Battlezone* and such, then perhaps people might have thought 'hey, Atari is back!' and taken more notice of the launch and the system.

Having said all that I will always remember the Jaguar fondly, the hardware really was quite excellent for its time and I very much enjoyed working with it, and with the people who made it at Atari. Even if the system is considered a failure I will still remember those times as some of the best in my career.



GX4000

MANUFACTURER Amstrad **YEAR** 1990

The GX 4000 featured an expanded colour palette, hardware sprites and cartridge-based games. Sounds amazing right? Wrong. [redacted]

THE VERDICT: There's not much wrong with the GX4000 itself – the hardware could compete reasonably against the Master System and NES. Unfortunately for Amstrad, it didn't have the software to compete as an alternative to those machines when it launched in 1990, and wasn't powerful enough to compete with the Mega Drive. With only a meagre 15,000 consoles sold, it is easy to see that the Amstrad GX4000 was the wrong machine for its time. [redacted]

SAM COUPÉ



MANUFACTURER Miles Gordon Technology **YEAR** 1989

The SAM was designed to capture 8-bit users looking to upgrade, by beating the 16-bit computers on price.

THE VERDICT: While the idea behind the SAM Coupé was solid, the product couldn't deliver on its promises. Delays caused the machine to miss the Christmas sales season, and when users received it, they found that the Spectrum compatibility was patchy, with some users able to play only half of their collections. Additionally, while the SAM was capable of competing with 16-bit machines, the upgrades required pushed it closer to 16-bit computer prices.

VECTREX

MANUFACTURER General Consumer Electronics **YEAR** 1982



The Vetrex was the first console to feature a built-in vector display, enabling the machine to reproduce arcade games more accurately than its competitors. [redacted]

THE VERDICT: The Vectrex had the tools to succeed – good software, competitively priced hardware and a unique selling point. Unfortunately, the machine was launched into a market crash. Even Milton Bradley's acquisition of General Consumer Electronics couldn't save the it from a loss of faith in videogames amongst the American public.

32X



MANUFACTURER Sega **YEAR** 1994

Sega's second attempt to upgrade the Mega Drive, designed to provide users with a low-cost way to experience next-generation gaming and stymie any potential threat from the Jaguar and 3DO. [redacted]

THE VERDICT: While the 32X was an interesting idea, it was doomed to failure. Consumers were wary of Sega's upgrades following the disappointing Mega-CD, and the press quickly and correctly identified it as a stopgap before the PlayStation and Saturn. After an initial flurry of good games, quality software quickly dried up as developers shunned the machine in favour of the more powerful dedicated next-generation consoles. [redacted]

CD-i

■ Philips ■ 1991

Launching at the large asking price of $700 with a poor early games line-up hobbled the CD-i early on, but Philips continued until 1998 regardless, eventually losing close to a billion dollars on the project.



AMIGA 1200

■ Commodore ■ 1992

The final budget Amiga model suffered from a lethal combination of Commodore's misadventures and advances on other platforms. Escom rescued the machine from Commodore, but folded a year later.



SINCLAIR QL

■ Sinclair ■ 1984

Despite its advances over the Spectrum, the QL's deliberate non-gaming market position turned off existing Speccy owners, while the Microdrive cartridges turned both publishers and business users against it.

ACTION MAX

■ Worlds Of Wonder ■ 1987

What could be better than a console that required a VCR and could only play games that required a lightgun? The answer, as unhappy Action Max owners discovered, is pretty much anything else.





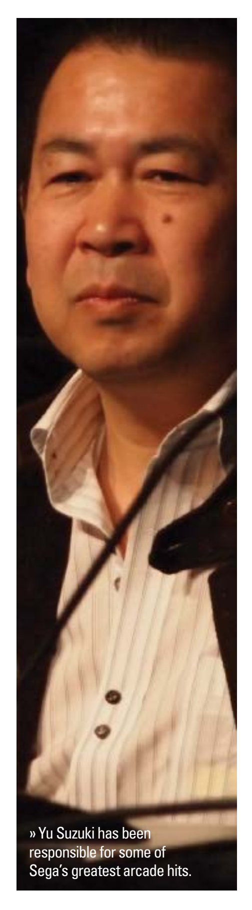
SPACE HARRIER

Back in the mid-Eighties, just one arcade game could claim to combine the thrills of a rollercoaster with the gameplay of a shoot-'em-up. Nick Thorpe joins Yu Suzuki for a return to the Fantasy Zone…

In the world of military aviation, the Harrier is an iconic piece of machinery. The incredibly successful craft gained the 'Jump Jet' nickname due to its unusual ability to take off and land vertically, negating the need for a runway. Within the world of videogames, Yu Suzuki's leap from obscurity to stardom was almost equally vertical. After performing coding duties on *Championship Boxing* for Sega's obscure early Eighties SG-1000 console, Suzuki designed the extraordinarily influential motorbike racer *Hang-On*, the first full-body arcade simulation game. With that completed, Suzuki then turned his attention to making a shooting game featuring the iconic aircraft.

"The original plan was supposed to be the military plane Harrier," the legendary arcade designer recalls, "there was not enough memory space for the graphics so we changed the format to science fiction. Thus we just kept the name Harrier and it became *Space Harrier*." No matter what the theme was, the road ahead was a rocky one. Simply tackling the idea of a 3D shooting game was pushing the boundaries, as Suzuki recalls: "There were no successful 3D shooting games before *Space Harrier*. Therefore when we submitted this idea, the 3D shooting genre was still taboo because the enemies were too small to hit."

Sega had experience in the field to back this up. In 1982, the company had released the arcade game *Zoom 909*, better known as *Buck Rogers: Planet Of Zoom* in the West. While it was a technically impressive game and one which was ported to practically every home system available at the time, its wide release had more to do with recouping the cost of the licence than arcade success. Both *Buck Rogers* and Sega's next 3D shooter, *Sub-Roc 3D*, shared the problem of small, hard to hit enemies. Other companies had offered shoot-'em-ups with 3D perspectives, such as *Tempest* and *Gyruss*, but avoided the problem by imposing limitations on movement and aiming. Suzuki and the *Space Harrier* team wished to allow for the same freedom as Sega's previous games, and found the key breakthrough that made it work in the game's original inspiration: "To solve this problem, we added the homing missile system like a real fighter aircraft and made it into an easy to hit shooting system."


» Yu Suzuki has been responsible for some of Sega's greatest arcade hits.



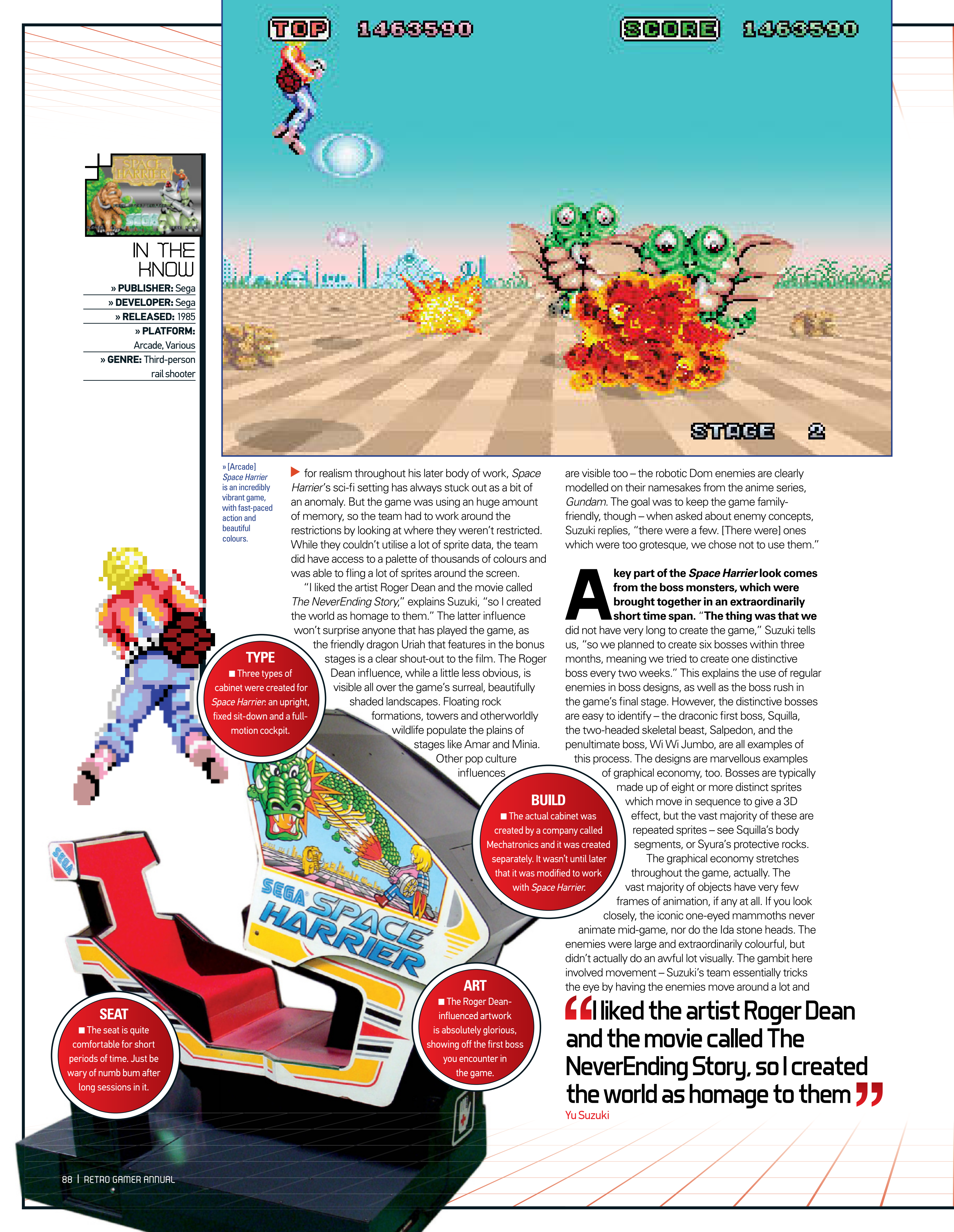

The other major advantage that *Space Harrier* had over *Buck Rogers* and *Sub-Roc* was the improved technology that had become available in the interim. "I had always thought about [creating *Space Harrier* with 8-bit technology]," Suzuki explains. "I was always interested in an algorithm for speeding up 8-bit technology." However, when the time came he didn't need to do so. Much like *Buck Rogers* was developed from technology originally used in *Turbo*, *Hang-On* had allowed Suzuki to work with 16-bit visual technology and *Space Harrier* was able to develop on that. But despite having access to cutting-edge graphics hardware, Suzuki remembers that the process was still subject to limitations. "There were loads of challenges, especially due to the fact that we were using line buffer at that time so we could not add many objects in line. Therefore we needed to come up with the solution by scattering the objects throughout the game."

With the technology in place, the look needed to be nailed down. It's not surprising that Suzuki had originally aimed for a realistic theme – given the simulation leanings of *Hang-On* and Suzuki's overall preference



SPACE HARRIER 101

■ *Space Harrier* is a shoot-'em-up in which the titular hero attempts to save the Fantasy Zone, home of the dragons, from evil creatures. The Harrier is permanently flying into the screen and must destroy any enemies in his path, while avoiding collisions with enemies and the projectiles they fire.



IN THE KNOW

» **PUBLISHER:** Sega
» **DEVELOPER:** Sega
» **RELEASED:** 1985
» **PLATFORM:** Arcade, Various
» **GENRE:** Third-person rail shooter

» [Arcade] *Space Harrier* is an incredibly vibrant game, with fast-paced action and beautiful colours.

for realism throughout his later body of work, *Space Harrier*'s sci-fi setting has always stuck out as a bit of an anomaly. But the game was using an huge amount of memory, so the team had to work around the restrictions by looking at where they weren't restricted. While they couldn't utilise a lot of sprite data, the team did have access to a palette of thousands of colours and was able to fling a lot of sprites around the screen.

"I liked the artist Roger Dean and the movie called *The NeverEnding Story*," explains Suzuki, "so I created the world as homage to them." The latter influence won't surprise anyone that has played the game, as the friendly dragon Uriah that features in the bonus stages is a clear shout-out to the film. The Roger Dean influence, while a little less obvious, is visible all over the game's surreal, beautifully shaded landscapes. Floating rock formations, towers and otherworldly wildlife populate the plains of stages like Amar and Minia. Other pop culture influences are visible too – the robotic Dom enemies are clearly modelled on their namesakes from the anime series, *Gundam*. The goal was to keep the game family-friendly, though – when asked about enemy concepts, Suzuki replies, "there were a few. [There were] ones which were too grotesque, we chose not to use them."

A key part of the *Space Harrier* look comes from the boss monsters, which were brought together in an extraordinarily short time span. "The thing was that we did not have very long to create the game," Suzuki tells us, "so we planned to create six bosses within three months, meaning we tried to create one distinctive boss every two weeks." This explains the use of regular enemies in boss designs, as well as the boss rush in the game's final stage. However, the distinctive bosses are easy to identify – the draconic first boss, Squilla, the two-headed skeletal beast, Salpedon, and the penultimate boss, Wi Wi Jumbo, are all examples of this process. The designs are marvellous examples of graphical economy, too. Bosses are typically made up of eight or more distinct sprites which move in sequence to give a 3D effect, but the vast majority of these are repeated sprites – see Squilla's body segments, or Syura's protective rocks.

The graphical economy stretches throughout the game, actually. The vast majority of objects have very few frames of animation, if any at all. If you look closely, the iconic one-eyed mammoths never animate mid-game, nor do the Ida stone heads. The enemies were large and extraordinarily colourful, but didn't actually do an awful lot visually. The gambit here involved movement – Suzuki's team essentially tricks the eye by having the enemies move around a lot and

TYPE
■ Three types of cabinet were created for *Space Harrier*: an upright, fixed sit-down and a full-motion cockpit.

BUILD
■ The actual cabinet was created by a company called Mechatronics and it was created separately. It wasn't until later that it was modified to work with *Space Harrier*.

ART
■ The Roger Dean-influenced artwork is absolutely glorious, showing off the first boss you encounter in the game.

SEAT
■ The seat is quite comfortable for short periods of time. Just be wary of numb bum after long sessions in it.

> "I liked the artist Roger Dean and the movie called The NeverEnding Story, so I created the world as homage to them"
> Yu Suzuki

stay on-screen for a very short amount of time. The game would need to be fast and active, or risk looking like a fight between cardboard cut-outs.

The outcome is of course well-known at this point – it worked spectacularly. *Space Harrier* was a powerful shock to the senses for any mid-Eighties gamer. It wasn't just smoothly animated and colourful, it was blazingly fast. While early enemies would circle around in the background to lower the perceived pace, it wasn't long before the Harrier started rushing headlong into herds of bouncing Loopers or dodging over and under waves of Binzbeans. The intensity of the experience is still present today no matter how you play it, but the sensation is heightened considerably if you can track down the motion cabinet, a feature which made *Space Harrier* into the centrepiece attraction of many an arcade.

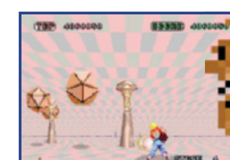
The combination of *Space Harrier* and its moving chair might seem like a perfect marriage of software and hardware, but according to Suzuki it wasn't a major part of the plan. "The Mechatronics team was developing the cabinet separately. Then later on we modified it to suit *Space Harrier*," he explains. In fact, the *Space Harrier* team had only an advisory role at a hardware level. "When it came to modifying it, we discussed the cabinet's speed, durability performance and throttle's specification, for example. Of course we regulated the cabinet control system by ourselves."

The sound design of *Space Harrier* is another key part of the overall experience. The game's voice clips, though short and few in number, are iconic. Each game begins with a chirpy, "Welcome to the Fantasy Zone!" and most will end with a dying cry from the Harrier. "Get ready!" when you've just got up, and "You're doing great!" when a boss bites the dust. The source of these sounds has unfortunately been forgotten, but the composer of the music is still known. Hiroshi Kawaguchi handled this aspect of *Space Harrier*, and provided a range of tunes which evoked a spectrum of emotions. However, for most people a mention of *Space Harrier*'s music will bring to mind one tune – the theme which plays throughout the game.

For its time, it was an epic in terms of both length and ambition, running for almost three minutes ▶



» [Arcade] The otherworldly scenery in *Space Harrier* was inspired by the artwork of Roger Dean.



» [Arcade] At points, you'll be unable to destroy anything and have to resort to dodging.



» [Arcade] Colour schemes change for each stage, ranging from desert hues to oddly mechanical pastel landscapes.

ピクセルパーフェクト

A selection of enemies to shoot down

PARKOMEN

SPACE JET

CANARIES

MUKADENSE

MISSILE

JET PLANE

SKEGG

BINZBEAN

LOOPER

TOMOS

MAMMOTH

RED DOM

GREEN DOM

BLUE DOM

IDA

ファンタジーフライト

It's hard to feel welcome in the Fantasy Zone when greeted by a group of mean creatures like this lot…

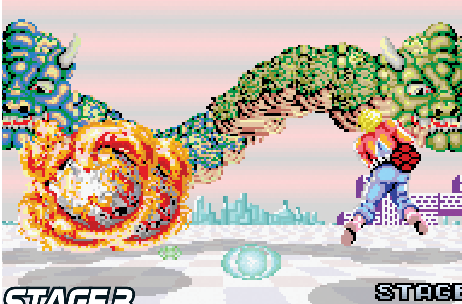
STAGE 1
SQUILLA

■ The iconic dragon boss turns up in the very first stage, firing as it advances and shielding itself as it retreats, swooping around the screen as it goes. You can only damage Squilla by hitting it in the head, which is easier to achieve when it's moving forwards.



STAGE 2
IDA

■ The stone heads that have pestered you throughout the level are back, orbiting a central one which needs to be destroyed. Once you've punched through, the orbiting heads will depart, making this an easier fight than the first boss in many ways.



STAGE 3
GODARNI

■ What could be worse than Squilla? A two-headed dragon, obviously! Godarni spits fireballs from both of its heads and, like Squilla, is vulnerable to being shot in the head. Whats worse is that both heads take damage independently – if one is destroyed, the other will continue to attack alone.



STAGE 4
DOM

■ These *Gundam*-style robots attack in formation, sticking to the flanks of the screen and switching sides with a big, arcing jump. There are only a few so the encounter is brief, but they're pretty fierce attackers so you'll want to dispose of them as quickly as you can.

STAGE 5
ROLLIES

■ The Rollies cluster up together and let loose a constant barrage of laser shots. Thankfully, they're easy to destroy – all you need to do is draw their fire away from where they're clustered with constant movement, so you can dive in for a few shots.



STAGE 6
TETRAHEDRON

■ This formation of enemies is a little troublesome, as each of its constituent parts can shield itself from damage – but much more quickly than the regular Tomos enemies. Keep circling in the opposite direction and blast away for the quickest path to success.



STAGE 7
SYURA

■ Your first variation on Ida features the same central stone head, this time orbited by a ring of floating rocks. Unlike the Ida fight, this ring doesn't scatter when hit, so you'll have to take it out in order to get to your target.



STAGE 8
DOM MKII

■ The giant mech is back, this time charging along the floor in the middle of the screen before going into a super-powered attack mode, denoted by flashing colours. As long as you know where it'll be, you can take it out before it becomes much of a threat.





STAGE 9
TOMOS

■ Supremely irritating as regular enemies, the Tomos assemble as a boss. Like Rollies, they attack as a cluster so you'll have to make multiple passes to take your shots. However, they open and close just like normal, ensuring that actually destroying any individual pod is quite tough to achieve.

STAGE 10
SALPEDON

■ Hey look, Godarni died and enrolled itself in the skeleton war! It's another double-headed dragon to shoot in the heads, but this time it's a little bonier. While they don't change into a range of colours when shot, each head does get progressively redder until it dies.



STAGE 11
OCTOPUS

■ Another variation on the Rollies, this boss is more resilient than the earlier variants, but its movement seems to be a lot more obviously structured. As always, you should be safe if you make sure to swing away from the boss to draw fire before each attacking run.

STAGE 12
BARBARIAN

■ Much like Syura, Barbarian is formed of a central head with a protective orbit of Loopers. Your tactics shouldn't vary a lot, in this case – shoot away the protective barrier and then blast it until it explodes. Are you starting to sense a pattern developing here?

STAGE 13
VALDA

■ Valda is a pretty fearsome creature to look at, as it looks just like a skeletal Squilla. Perhaps unsurprisingly, it also attacks in the same way as Squilla, and is vulnerable to exactly the same tactics as the very first boss. Shoot it in the head until it goes away.

STAGE 14
STANREY

■ Stanrey is the giant aircraft here, and it is indestructible so don't waste your time firing upon it. It just spews out Doms to attack you, while jet planes swoop around and cause mayhem. Worse yet, this is the first boss battle in which regular stage objects like trees are still present.

STAGE 15
WI WI JUMBO

■ This guy starts off shielded, and is flanked by a pair of Komainn that will only go down when he does. Each Komainn will attempt to fry you with fireballs, while Jumbo himself will fling rocks at you until you are very dead. Ignore the small fry, shoot the big guy.

STAGE 16
HAYA-OH

■ This twin-bodied fire dragon wasn't in the original arcade game, but was added to the Master System conversion and has been present in various conversions since then. Its fast, twisting motion is unlike that of any other boss. Fun fact: Haya-Oh is named after former Sega president Hayao Nakayama.



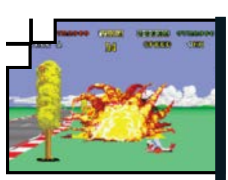
without looping. Despite the fact that it plays near-continuously throughout the game, the *Space Harrier* theme has enough variation that it doesn't become repetitive. However, the game also contains a number of other iconic tunes, including the boss tunes which interrupt the main theme. Once again, Kawaguchi takes a diverse approach to these encounters – Squilla gets a typically driving piece of boss music, but Ida relies on a mean bass line and Godarni's tune is almost sedate. We'd also be doing the game a massive disservice if we didn't mention the short, sweet and sad high score screen tune, White Summer.

For all we've talked about *Space Harrier* so far, much of the discussion has been about secondary factors – the graphical themes, the music, the cabinet – and little about the actual game design, beyond the solution to the

> "The Mechatronics team was developing the cabinet separately. We regulated the control system"
> Yu Suzuki

problem of small enemies that was crucial to getting the game off the ground. Would it be fair to say that the success rested on the game's unique technology, then? Yu Suzuki doesn't believe so. "The Super Scaler technology was important to increase speed, however if I think about how important it was for the game to succeed, I do not think it was that important." We'd concur. No matter how much of a thrill a game delivers, if the game doesn't come up to scratch, you'll never insert a second credit – and the game had to survive in stand-up cabinets as well as the motion models.

The novelty factor of a 3D shooting game was certainly a draw for players, but each element of the game was carefully considered. "I felt that a linear control system was suited better for the flying game," Suzuki explains when asked about the decision to use analogue controls over a digital joystick. It was important that the player could point and shoot with as few problems as possible, which meant giving the greatest degree of control possible. Also important was what the player was actually shooting, and *Space Harrier* presents enough enemy variations to keep a player on their toes. The game includes passive obstacles such as trees and floating rocks as well as active threats that move around and shoot you, giving the player a chance

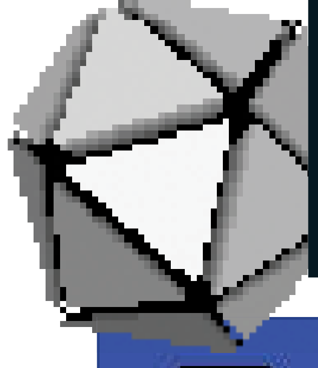


DEVELOPER HIGHLIGHTS

HANG-ON (PICTURED)
SYSTEM: Arcade
YEAR:1985

OUT RUN
SYSTEM: Arcade
YEAR: 1986

AFTER BURNER
SYSTEM: Arcade
YEAR: 1987



to cause more carnage without greatly increasing the difficulty of the game. Then, of course, there's the distinction between the threats you can remove and the indestructible ones which needed to be avoided. "Having two types of objects makes the game more interesting and enjoyable," Suzuki tells us. "Also, by having this type of object, it creates amusing scenes such as the ball bouncing back like a pinball."

It's fair to say that *Space Harrier* was a simple game to play – after all, it's a twitch shoot-'em-up in which you can only move and shoot – but it's worth noting that there's a very solid, well- thought out design underpinning the entire experience. The first stage teaches you everything you need to know about the game. Obstacles on the ground aren't just scenery, but you'll be let off with a trip over the bushes, rather than being killed outright. Enemies are there to be shot, but when you try to attack a closed Tomos, you'll learn about the pinball-esque rebound that accompanies an ineffective shot.

Also, while shooting is advisable to reduce the number of projectiles, the fact that enemies always directly aim at the Harrier means that players can often get by simply by moving around the screen and taking care not to cross their own path too often. Combat is only forced in certain boss fights, when it is impossible to proceed without beating the enemy. This notion of elimination versus avoidance is played with throughout the game. In some stages, such as the sixth stage, Olisis, you'll be under constant fire but able to respond in kind. At other points, such as the beginning of the fourth stage, Ceiceil, nothing can be destroyed and the player's ability to control the Harrier is tested instead.

The game also smartly rations its surprises. There's always a reason to insert the next coin, as new enemies are constantly popping up. The two enemies that accompany the Harrier on the title screen, Dom and the mammoth, don't appear until the fourth and seventh stages respectively. The temptation to show off everything within the first few minutes is always there for arcade game designers, who know that far fewer players will see the end of the game than the beginning, but some of the most spectacular set-pieces are saved as a reward for players that go the distance. The assault by the mothership Stanrey is an excellent example, with Doms pouring out en masse to attack you.

When Suzuki is asked why *Space Harrier* has retained its appeal over the past 30 years, he is very definite in his answer. "There are not many games like *Space Harrier*. And even now if you play it, it has good controllability and easy to take a steady aim and hit the enemy well," he explains. "I believe that this pleasant feeling of hitting the enemy is the most attractive part of this game." It makes sense. *After Burner* featured a lock-on system and as the 3D shoot-'em-up has developed over the last 30 years, in part thanks to Sega-made efforts such as *Panzer Dragoon* and *Rez*, many of them have taken inspiration from that system rather than *Space Harrier*'s direct approach. Even the *Space Harrier* spin-off, *Planet Harriers*, adopted lock-on shots.

However, when you go back and play *Space Harrier*, you'll see what Suzuki means about the appeal of

> **"I believe that this pleasant feeling of hitting the enemy is the most attractive part of this game"**
> Yu Suzuki



» [Arcade] Dom is an aggressive enemy, leaping about and eventually gaining the ability to fly.



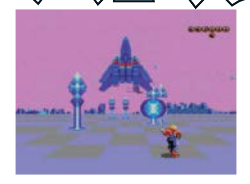
» [Arcade] Some conversions of *Space Harrier* have changed the Dom sprite, due to its resemblance to a *Gundam* mech.



» [Arcade] While some bosses receive multiple variants, others like Wi Wi Jumbo only appear once.

バトルシーン

Space Harrier's adventure in the Fantasy Zone was just the beginning of the fight…



SPACE HARRIER 3-D
1988

■ Just a year after the end of *Space Harrier*, the Dragon King passes away and a war of succession breaks out. Uriah is meant to take the throne, but his evil cousin has other ideas. This Master System exclusive shows off the 3D glasses well, but it is even jerkier than the system's original port.



SPACE HARRIER II
1988

■ Sega went back to the Fantasy Zone to demonstrate the power of the Mega Drive. Kotaru Hayashida helmed the sequel, which gave players a choice of starting level and a new hoverboard bonus stage. Versions also appeared for the Amiga, Atari ST, Amstrad CPC, Spectrum and C64.



SPACE FANTASY ZONE 1991

■ This unreleased PC Engine CD game is the link between the *Space Harrier* and *Fantasy Zone* series. It's a 3D remake of *Fantasy Zone* – Opa-Opa flies into the screen Harrier-style and takes on enemies from *Fantasy Zone*, with *Space Harrier* melodies and enemies mixed in for good measure.



PLANET HARRIERS
2001

■ Produced and directed by Toshihiro Nagoshi, this spin-off elaborated on the basic concept of *Space Harrier*. While players still controlled flying people with big laser cannons, this sequel featured brand new lock-on shots, power-ups, co-operative play and of course polygonal 3D visuals.



TYPING SPACE HARRIER 2002

■ You'd be surprised by just how well *Typing Space Harrier* can improve your speed and accuracy on the keyboard. However, we're still not sure why this Japanese PC game exists. We would have thought Sega had satisfied its urge to create a novelty typing game with *The Typing Of The Dead*...

hitting the enemy. In the first stage, the player is able to destroy every object they see, from the bushes and trees to actual threats, and it's an intoxicating feeling. Lock-on shooters have a certain rhythm – engage, aim, release, repeat – but *Space Harrier* has you frantically hitting the trigger as fast as possible. Even when the act of hitting enemies in regular play becomes much harder as the game progresses, *Space Harrier* offers respite in the unrestrained destruction of the bonus stages, in which you pilot Uriah into trees for extra points.

Interestingly, despite the fondness he clearly feels for the game, Suzuki has had very little involvement with *Space Harrier* in the 30 years since the game was released. When the time came to convert the game to the Master System, the job was left to Mutsuhiro Fujii and Yuji Naka, who added a final boss and an additional ending sequence to give the game a more satisfying conclusion – improvements which have been added to subsequent conversions. The next time Suzuki visited the 3D shooting genre in 1987, technological advances meant that he was able to finally realise his vision of a game based on a fighter jet with *After Burner*, a game which further developed the genre.

Of course, *Space Harrier*'s success meant too much to Sega for the series to go away, so the series was left in the care of other Sega staff. In fact, the series has attracted some of Sega's most notable staff members over the years – *Sonic The Hedgehog*'s character designer Naoto Ohshima, *Alex Kidd In Miracle World*'s planner Kotaro Hayashida and *Super Monkey Ball*'s director Toshihiro Nagoshi have all left their stamp on the series through various sequels. Suzuki has only ever returned to *Space Harrier* by including it in the *Shenmue* series, though there's clearly a lot of love for the game on display – you can take a break from Ryo Hazuki's quest for vengeance to actually play *Space Harrier* in the arcade, and even collect figurines of the game's characters from capsule toy machines.

That's not to say that Suzuki wouldn't like to revisit *Space Harrier*, though. "I was happy that *Space Harrier* was brought back on 3DS," Suzuki says, referring to the recent release *3D Space Harrier*. "However I wish I could have created a totally new *Space Harrier* by myself to be honest," he adds with a laugh. While Suzuki's current commitments may prevent him from working on a new *Space Harrier* for the time being, we wouldn't rule it out entirely. Prior to beginning work on *Shenmue III*, Suzuki's studio, Ys Net, oversaw the mobile games *Virtua Fighter Cool Champ* and *Virtua Fighter Fever Combo*, which shows that he's sincere about revisiting Sega's past successes and that Sega is willing to let him do so.

It's a tantalising thought, too. Between his love of breaking new ground and mastery of arcade game design, it's easy to imagine Yu Suzuki pulling off something special were he to return to *Space Harrier*. Until then, the prospect will have to remain confined to our own fantasy zones. *



» [Arcade] Clever use of movement camouflages the fact that many enemy sprites have little animation.

Special thanks to Maiko Hinson for her translation work, Masae Nakagawa for the introduction, and of course, Yu suzuki for his precious time



フライト旅程

Space Harrier first took flight in the arcade, but landed on a number of home formats too. Here's a look how the conversions fared…







MASTER SYSTEM 1986

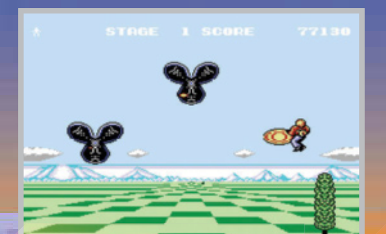
■ Sega's first attempt at converting *Space Harrier* retains most of the action due to clever use of graphics hardware, but loses a lot of the speed of the arcade version, and scrolling isn't smooth. On the other hand, a brand new final boss and a proper end sequence were added.

ZX SPECTRUM 1986

■ Elite got the international computer rights for *Space Harrier*, and got to work on conversions quickly. The Speccy features smooth object movement, but the visuals aren't pleasant. It's too hard to make anything out, which unfortunately mars the gameplay experience quite a bit.

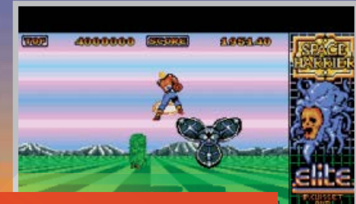
AMSTRAD CPC 1986

■ We're pleased to see the Amstrad given a distinct conversion of the game, but it's unfortunately not brilliant. The full-colour graphics appear great, until objects start to appear as simple wireframe outlines, which makes it quite hard to hit your targets with any degree of consistency.









FAMICOM 1989

■ Takara's conversion features clean visuals and smooth sprite movement. However, the trade-off is that the game's sprites are small and flicker heavily. Completists should note that the boss Haya-Oh makes another appearance here too.

AMIGA 1989

■ The Amiga version of *Space Harrier* is very playable. The game uses an updated version of Elite's graphics set with better colours, does away with the vertical bar on the right of the screen, runs more smoothly and has better quality music.

PC 1989

■ Imagine the Atari ST version of *Space Harrier*, but with a slideshow frame-rate that ensures delivery of fireballs to your face with no warning. You might as well strap on a jetpack and fly face-first into a rock yourself.

ATARI ST 1988

■ Elite's first 16-bit version of *Space Harrier* is certainly an odd one, as its fully redrawn visuals mean that it looks pretty good without looking authentic. It certainly plays well too, with the mouse offering a good analogue control scheme.









GAME GEAR 1991

■ Despite being based on the Master System conversion, the Game Gear version of *Space Harrier* is a rather unique beast. The game has been shortened to 12 stages, enemies were redrawn in a more organic style, and there's a brand new password facility.

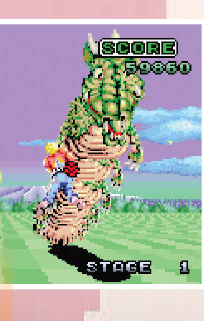
32X 1994

■ Sega's decision to promote its new add-on with an old game might have been questionable, but it's a great conversion. There's a little slowdown and some letterboxing compared to the arcade version, but the 32X version of *Space Harrier* is otherwise almost perfect.

SATURN 1996

■ As well as cleaning up the deficiencies of the 32X version, this Saturn version – released with the *Sega Ages* collection – offers analogue control via the Mission Stick or the 3D Controller, giving it a boost in authenticity.





GAME BOY ADVANCE 2003

■ *Space Harrier* is included in *Sega Arcade Gallery* and, like every conversion in this pack, it gradually reveals its imperfections – collision detection feels off and the Harrier's speed doesn't feel right in fast or slow mode.





COMMODORE 64 1987

■ The C64 got its version of *Space Harrier* a little later than its 8-bit competitors, but the wait was perhaps worth it. Enemy sprites are rather basic and the object movement is very choppy indeed, but it's at least easy to see what you're meant to be doing.

FUJITSU FM77AV 1987

■ Sega handed the Japanese computer rights to Dempa Micomsoft, which delivered a range of interesting conversions. Fujitsu's FM77AV received a version which compared well visually with the Master System version, and had a very good rendition of the iconic theme tune.

SHARP X68000 1987

■ The X68000 handled *Space Harrier* beautifully, as you'd expect from such a powerful machine. It's a fast, smooth conversion which even boasts the Master System version's added boss and end sequence. This was the definitive conversion for a long time.







PC ENGINE 1988

■ Dempa Micomsoft also handled the PC Engine version of *Space Harrier.* It's a very good conversion, with a good sense of speed and nice object movement. It's visually quite similar to the X68000 version, but with fewer colours and simulated scaling.

SHARP MZ-700 1988

■ This homebrew port by Kazuhiro Furuhata was officially approved by Sega for publication in the Japanese Sharp format magazine *Oh!X*, as part of their 'Not Impossible On MZ-700' series. It's actually rather playable, but the visuals are *incredibly* abstract.

SHARP X1 1988

■ Sharp's machine bests the NEC competition by retaining the speed and playability while adding extra colour and detail, thanks to its use of character graphics for some objects. For some players, it might even be preferable to the Fujitsu version.

NEC PC-8801 1988

■ While it is mechanically faithful to the arcade game and is rather fast and playable, the PC-88 version of *Space Harrier* does have one major limitation – most objects are rectangles! NEC's PC-6001 received a similar version with fewer colours and sprites.

PLAYSTATION 2 2003

■ This enhanced remake of the original arcade game appeared on *Sega Classics Collection*, and as a stand-alone release in Japan. As well as polygonal graphics and a remixed soundtrack, the game adds new mechanics including bombs and lock-on shots.



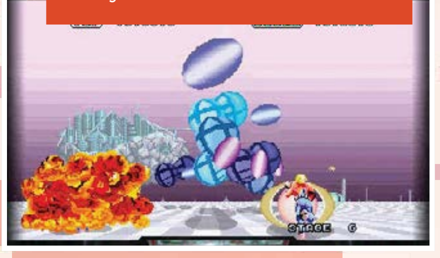


ATARI 8-BIT 2011

■ It's not an official conversion but we couldn't help but mention this homebrew conversion by Chris Hutt and Sal Esquivel. To see such smooth movement and hear authentic sounds from Seventies hardware is incredible.

3DS 2012

■ *3D Space Harrier* was released as part of M2's *3D Classics* range, and adds stereoscopic visuals to enhance the experience. The game features Haya-Oh and loads of customisation options, making it one of the best versions out there.



AND THE REST…

■ The arcade version of Space Harrier is also emulated on compilations for a variety of platforms. These include *Yu Suzuki Game Works Vol 1*, *Shenmue* and *Shenmue II* for Dreamcast, *Shenmue II* for Xbox, *Space Harrier II: Space Harrier Complete Collection* for PS2 and Mega Drive *Ultimate Collection* for PlayStation 3 and Xbox 360.


THE
EVOLUTION OF
POKéMON
™

EXPLOSIVELY POPULAR IN THE NINETIES, POKÉMON HAS OUTLIVED THE INITIAL FAD AND BECOME ONE OF THE WORLD'S MOST POPULAR SERIES OF GAMES. WE TALK TO THE DEVELOPERS ABOUT THE SERIES THAT CHALLENGES YOU TO "CATCH 'EM ALL"...

It's extremely hard not to be aware of *Pokémon* – if you haven't been tempted by the urge to catch 'em all, you probably know someone who has. The videogames have sold over 200 million units, with some titles topping the 10 million mark. It's far more than just a gaming phenomenon, though – since the series launched in the UK back in 1999, Pikachu's smiling face has appeared everywhere from trading cards to cinema screens. However, it may come as a surprise to many of you that the origins of the series go all the way back to 1990.

The *Pokémon* series has always been primarily developed by Game Freak, a Japanese team which grew out of a fanzine of the same name produced by writer Satoshi Tajiri and illustrator Ken Sugimori. "When we first started, some of the readers were actually programmers and they had the skills and access to the hardware – that's how we started in producing videogames," Ken explained in a **games™** interview on the history of the series. The firm made its debut in 1989 with *Quinty*, a Famicom puzzle game localised for the North American NES market as *Mendel Palace*. That same year, the Game Boy was released and Game Freak moved quickly to outline a vision of a new type of RPG, which would utilise the handheld's link cable and portable nature. A design document entitled 'Capsule Monsters' was ready by 1990.


» Junichi Masuda has overseen the whole series.

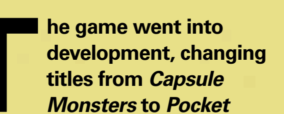

» Shigeru Ohmori has directed the 3DS remakes.

When you examine the *Pokémon* games on the most basic level, they are fairly typical Japanese RPGs with a few key twists. The first is that as a Pokémon trainer, instead of gathering party members through the storyline, you recruit the monsters you encounter in the wild. This element is present in the early design documents, though the original idea involved players having



a charisma stat, whereas in the final game they simply lower a wild Pokémon's health until it can't resist being captured in a Poké Ball. These monsters have special types, such as Fire and Water, which make some Pokémon more or less effective against others. The second major twist is that the games each contain a strong multiplayer element, atypical of RPGs, in which players can trade their creatures or engage in battles. Some Pokémon even require trading to evolve into their stronger upgraded forms. This was also a key part of the pitch document, forming the centrepiece of Satoshi Tajiri's vision for the game.

The final twist is that each game comes in at least two versions, with a select number of Pokémon absent from each. The brainchild of Shigeru Miyamoto, a friend and mentor of Satoshi, this was a stroke of genius – rather than having the ability to obtain all the monsters with enough dedicated solo play, players were required to engage with the multiplayer functions of the game. Also speaking to **games™**, composer and programmer Junichi Masuda explained, "People say that when you're playing videogames, you're usually playing on your own. So we wanted to create an experience where you can play the game but still play together with friends at the same time and all have fun."



The game went into development, changing titles from *Capsule Monsters* to *Pocket Monsters* due to trademark difficulty, and stayed there for a very long time. Despite having been pitched soon after the release of the Game Boy, *Pocket Monsters* wouldn't arrive in Japan until the start of 1996 – a time when the monochrome hardware looked to be on its last legs. *Pocket Monsters Red* and *Green* followed the standard RPG model outlined above, with the key differences changing the goal of the game. The single-player quest involved gathering eight badges from battling gym leaders – other trainers that served as bosses – before taking on the Elite Four and your rival, as a final boss run. Once that was done, the social aspect of the game became necessary as you sought to complete your collection of 150 Pokémon.

The wrinkle in the formula was that there was actually another creature, the 151st Pokémon, Mew. The legendary monster was added late in development in space created after the game's debug tools were removed, an untested addition that would be unthinkable today. Luckily, Mew didn't cause problems – it turned out to be something of a solution. Unavailable during regular



» [Game Boy] Quests in the games usually involve ferrying items around or beating up an evil faction.

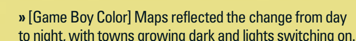


» [Game Boy Color] *Pokémon Gold* and *Silver* established the convention of adding new Pokémon in sequels.



» [Game Boy Color] While *Gold* and *Silver* supported the GBC, both still worked on the original Game Boy.




» [Game Boy Color] Maps reflected the change from day to night, with towns growing dark and lights switching on.



play, Mew did occasionally appear via glitches and rumours of how to obtain it began to form. Mew was able to be distributed to cartridges at special events, the first of which was a competition in CoroCoro Comics which attracted 70,000 entries. Word of mouth spread and the game's initially sluggish sales turned around, later aided by additional merchandising. Though *Pocket Monsters Red* and *Green* were released in February 1996, they didn't hit their peak sales until the summer of 1997.

After a lengthy localisation delay, *Pocket Monsters* – now retitled *Pokémon*, and in *Red* and *Blue* versions – arrived in the USA in 1998, then Europe and other PAL territories in 1999. The slow build seen in Japan wouldn't be a factor in these territories, as *Pokémon* arrived with a co-ordinated marketing blitz that saw the TV series, trading card game and videogames hit almost simultaneously. A craze started almost overnight, helped along by additional special versions such as *Pokémon Yellow*, which starred Pikachu and took elements from the TV series. Ultimately, the first generation of games sold over 23 million copies. But while the first games were still making waves internationally, a sequel was needed for Japan and arrived in late 1999.

> **"You can still play together with friends at the same time and all have fun"**
>
> Junichi Masada extols the social aspect of Pokémon

Pokémon Gold and *Silver* served as the first massive overhaul to the series, providing a brand new quest in a new region, Johto. The most immediately obvious new feature was a visual overhaul as a result of Game Boy Color support. However, the changes went far deeper. A battery-powered real-time clock was included in the cartridge, affecting what happened in-game. Certain Pokémon were more abundant during the day while others could only be found at night, and other events only took place ▶



POKÉMON SILVER SCREEN

There's a good chance that your first exposure to the *Pokémon* franchise didn't come from the games but the animated series. It follows Ash Ketchum's adventures as a Pokémon trainer, accompanied by his trusty Pikachu and initially gym leaders Brock and Misty, who were later replaced by a rotating cast of companions. Along the way they take part in gym battles and capture new Pokémon, and are regularly attacked by inept Team Rocket grunts Jessie and James, along with their talking Meowth.

The show has been a huge success and remains in production today, with over 850 episodes produced as well as an astonishing 17 movies. The first film grossed over $163 million worldwide and was briefly the highest-grossing movie based on a videogame – a record later taken by the 2001 adaptation of *Tomb Raider*. However, it's often criticised for poor animation and an overwhelming focus on Ash's Pikachu, who wins battles he really shouldn't.

The *Pokémon* cartoon series has had five episodes removed from circulation globally, predominantly to show sensitivity following real-world disasters, along with three more removed from the English-language run due to issues such as use of weaponry. However, the biggest controversy was an episode featuring the virtual Pokémon Porygon, which sent hundreds of Japanese children to hospital in 1997 after triggering fits with flashing imagery.





on specific days of the week. New Pokémon could now also be acquired by breeding almost any of your acquired existing creatures, allowing for exclusive moves. Two brand new types of Pokémon were also included, Dark and Steel, which were intended to redress some of the balance issues with the first game – particularly the dominance of Psychic Pokémon.

However, the big new inclusion was that of 100 new Pokémon. These included extra evolutionary stages for existing Pokémon, such as Pichu, the baby form of Pikachu, and Slowking, a second stage for Slowpoke which serves as an alternative to the first game's Slowbro. Also, another special event Pokémon like Mew was included in the form of Celebi. Junichi, who would become director of the series following *Gold* and *Silver*, explains the philosophy behind new additions: "I always like to come up with the number first. When I'm envisioning what the world is going to be like, I think about what kind of Pokémon people are going to encounter there, and then how many are we going to need, so I come up with the number first usually."

***Pokémon Gold* and *Silver* were massively successful worldwide, achieving 23 million** sales in a much shorter period than the first generation of games due to quicker localisation. An enhanced third version followed with *Pokémon Crystal*, but new hardware was already on the horizon in the form of the Game Boy Advance. A new generation of games was already on the way, this time titled *Pokémon Ruby* and *Sapphire*.

"I always like to come up with the number first"

How Junichi Masada goes about the process of introducing brand new Pokémon to the series

A BREED APART

Lots of alternative monster-raising games are available for hipsters to enjoy…



MONSTER RANCHER

FORMAT: PlayStation
YEAR: 1997

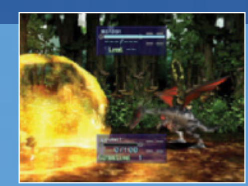
■ Tecmo's spin on the genre offers similar battling gameplay to *Pokémon*, but a very different monster acquisition system. Players generate new creatures by putting music CDs into the PlayStation's disc drive!



DRAGON WARRIOR MONSTERS

FORMAT: Game Boy Color
YEAR: 1998

■ A spin-off of Enix's RPG series, this was the strongest *Pokémon* competitor on the Game Boy, offering 215 monsters and a deep breeding system which helped set it apart. PlayStation and 3DS remakes have followed.



JADE COCOON

FORMAT: PlayStation
YEAR: 1998

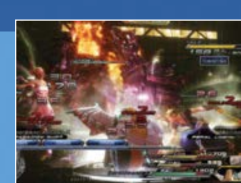
■ The game's unique look was created by Katsuya Kondo, an animator and character designer famed for his work on Studio Ghibli films such as *Kiki's Delivery Service*. Decent sales ensured that a PlayStation 2 sequel followed in 2001.



DIGIMON WORLD

FORMAT: PlayStation
YEAR: 1999

■ Bandai's rival franchise has never scaled the same heights as *Pokémon*, but the games are fondly remembered by those who grew up with them. One difference is that only one partner Digimon accompanies you throughout the main quest.



FINAL FANTASY XIII-2

FORMAT: PS3/Xbox 360
YEAR: 2011

■ The middle child of Square Enix's RPG trilogy lets players capture monsters during battle, to serve as party members. As in *Pokémon Red* and *Blue*, there are roughly 150 monsters to collect and strengthen.



These games took place in another new region, Hoenn. "With the Hoenn region I wanted to go for a feel of abundant nature," explains Junichi. "When I was younger, my grandparents lived in Kyushu and I would visit them, and whenever I was there I'd always be catching bugs, playing in the river, catching fish and stuff like that, so I wanted to bring that feeling of nature to the games." The cohort of new Pokémon included 135 creatures, raising the total number to collect to 386. However, despite support in the code for all 386, only 202 could be caught in *Ruby* and *Sapphire* and trading with previous generations was impossible, creating a problem that the developers would need to solve later. Major improvements were made to the battle system, including team battles in which four Pokémon could fight and a new ability system, which gave Pokémon passive powers that affected battle.

However, the biggest change was an expansion to the non-battling play available, with the inclusion of Pokémon contests in which your creatures would perform their moves in front of a judging panel, in competition with other trainers. "At the time when we were developing the games, we really wanted to think of a way to expand the appeal of the Pokémon games," reveals Junichi. "So we thought of a variety of ways that people could enjoy gameplay with Pokémon without battling them." Despite this attempt to expand the appeal of the series, *Pokémon Ruby* and *Sapphire* didn't sell as well as previous games. However, even a dip below par for *Pokémon* produces results that other series can only dream of – with 16 million copies sold, the games were comfortably the bestselling titles on the Game Boy Advance.

CARD CATCHER

Taking the battles from cartridge to cardboard

The Pokémon Trading Card Game, first introduced in October 1996 in Japan, is an unusual spin-off product in that has taken on a life beyond that of the videogames. It depicts battles similar to those in the videogames, with a few key differences – Pokémon are able to evolve during the course of the battle, and must utilise Energy cards to attack and retreat. The game ends when either one player has no Pokémon in play, or a player has revealed their six prize cards by knocking out opposing Pokémon.

When *Magic: The Gathering* publisher Wizards Of The Coast licensed the game for English-speaking audiences in the late Nineties, many players ignored the battling gameplay and focused on trading and collecting. The popularity of the cards was such that many schools banned them, fearing problems with thefts and uneven trades. A foil Charizard was the most prized card from the first base set – a first-edition copy in good condition can still fetch a pretty penny today.

The Pokémon Company assumed worldwide control of the game in 2003 and continues to offer it both as a physical card game and a digital version (for PC, Mac and iPad). But if you're looking for a more retro way to enjoy it, the card game received its own GBC adaptations, too. Hudson Soft's 1998 *Pokémon Trading Card Game* tasked the player with beating AI opponents in an RPG-style quest. It was well-received by players and critics alike, selling over two million copies and spawning a Japan-only sequel in 2001, which eventually received a fan translation in 2012.

> "We thought of a variety of ways people could enjoy gameplay with Pokémon without battling them"
>
> Junichi Masada explains the introduction of Pokémon contests



» [GBA] Certain moves became more useful thanks to *Ruby* and *Sapphire*'s team battles, since they hit all opponents.

In 2004, *Pokémon FireRed* and *LeafGreen* were released. These were the first *Pokémon* remakes, and according to Junichi were a part of the plan as soon as the series moved to the Game Boy Advance.

» [GBA] The GBA's graphical prowess allowed the designers to make towns that looked more realistic.



» [GBA] *Ruby* and *Sapphire* introduced rival factions of evildoers to defeat – Team Aqua and Team Magma.

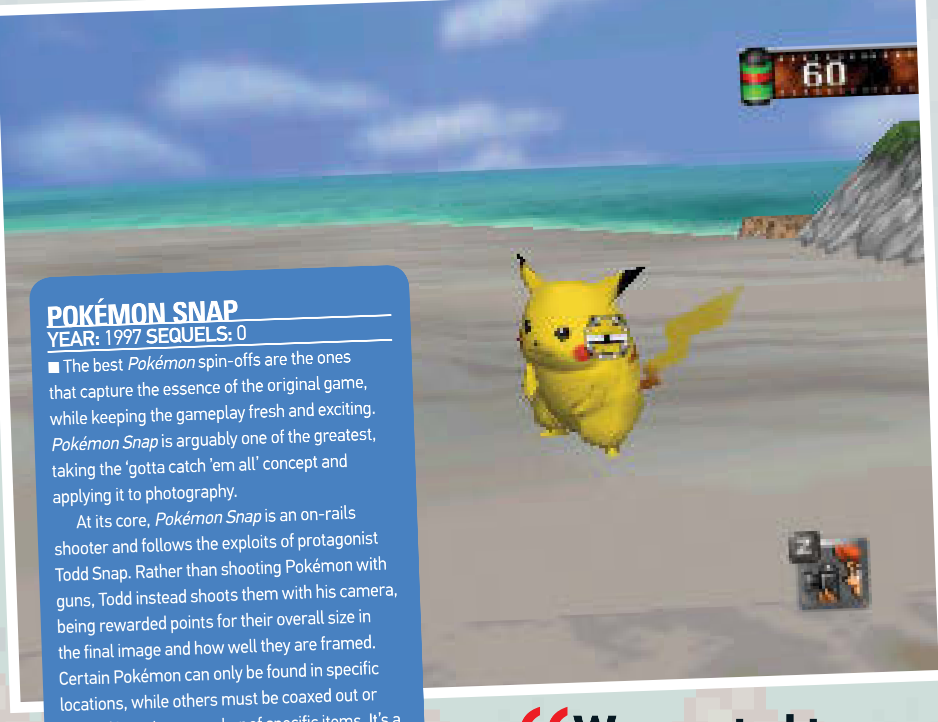


"One of the main reasons [for developing remakes] was really more of a technological reason, as the hardware couldn't communicate with each other between the Game Boy and the Game Boy Advance. Even when we were first developing *Ruby* and *Sapphire* we knew we wanted to players to be able to catch all of the old Pokémon as well as the newer ones." *FireRed* and *LeafGreen* were faithful remakes with improved visuals and some expanded content to include *Ruby* and *Sapphire*'s improvements, most notably an additional post-game quest in the new Sevii Islands region. Success followed once again, with critical acclaim and around 12 million sales.

The Game Boy Advance was superseded by the Nintendo DS at the tail end of 2004, but with *Pokémon FireRed* and *LeafGreen* having just completed their worldwide release cycle, it was clear that all eyes were still on the older systems. While the DS received the forgettable spin-off *Pokémon Dash*, the Game Boy Advance got *Pokémon Emerald*, a substantial game which served a similar purpose to *Pokémon Crystal* by providing an enhanced third version of *Ruby* and *Sapphire*. Fans would have to wait until 2006 to get their hands on the fourth generation of Pokémon games.

THE SPIN-OFFS

There are an insane number of Pokémon offshoots, so Darran decided to look at the best and worst examples



POKÉMON SNAP

YEAR: 1997 **SEQUELS:** 0

■ The best *Pokémon* spin-offs are the ones that capture the essence of the original game, while keeping the gameplay fresh and exciting. *Pokémon Snap* is arguably one of the greatest, taking the 'gotta catch 'em all' concept and applying it to photography.

At its core, *Pokémon Snap* is an on-rails shooter and follows the exploits of protagonist Todd Snap. Rather than shooting Pokémon with guns, Todd instead shoots them with his camera, being rewarded points for their overall size in the final image and how well they are framed. Certain Pokémon can only be found in specific locations, while others must be coaxed out or flushed by using a number of specific items. It's a great game and it's absolutely criminal that there have been no sequels for it.

HEY YOU, PIKACHU!

YEAR: 1998 **SEQUELS:** 0

■ No doubt inspired by the interest in Tamagotchi, developer Ambrella clearly thought the concept could be applied to *Pokémon*. It couldn't, as proven by this innovative yet highly disappointing game. Players use the N64's Voice Recognition Unit to interact with Pikachu. It can take part in a variety of activities, from fishing to making stew, but poor controls and rudimentary voice technology make it too frustrating to play. Spirituals sequels exist in the form of *Pokémon Channel* for the GameCube and two *PokéPark* games for the Wii, but they're just as disappointing.



> **"We wanted to go more in-depth and actually have Pokémon appear in the game world"**
>
> Shigeru Ohmori on one of the striking new features in Omega Ruby and Alpha Sapphire





POKÉMON STADIUM

YEAR: 1999 **SEQUELS:** 1

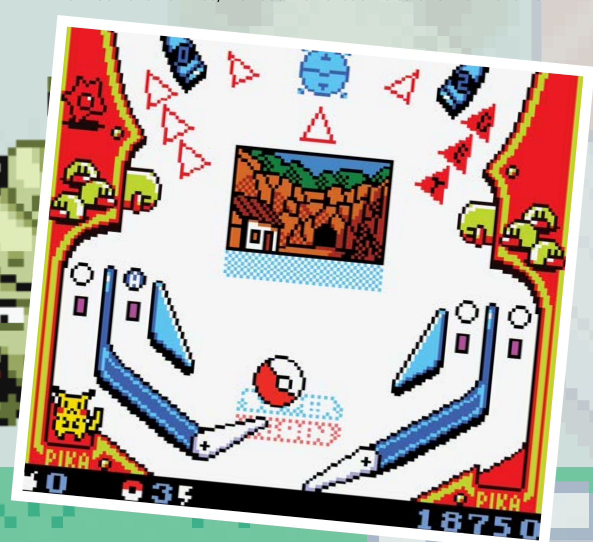
■ When Nintendo revealed Pokémon were heading to the N64, we assumed an awesome 3D-based RPG. We assumed wrong.

Despite our initial disappointment, *Pokémon Stadium* proved an essential addition to any Pokéfan's collection, due to its ability to let you transfer – via the Transfer Pak – Pokémon from *Red* and *Blue* and battle with them in glorious 3D. Fighting takes place across four cups, with the player choosing from six available Pokémon. It's essentially just the scrapping from the original games, but made better due to the impressive-looking visuals. We'd argue the sequel is the better game, however, due to some truly brilliant mini-games.

POKÉMON PINBALL

YEAR: 1999 **SEQUELS:** 1

■ *Pokémon Pinball* was another early Pokémon release that proved Nintendo's pocket monsters were perfectly at home in other genres. It's most memorable for being one of the first Game Boy Color games to feature the underused rumble pack, resulting in an oversized cartridge. While the physics are a little off at times, the two tables – Red and Blue – are well crafted and feature lots of interesting spinners and ramps. Best of all, however, are the 'Catch' and 'Evolution' modes that see you either trying to capture or evolve a specific Pokémon in under two minutes. And if you want that true Pokémon vibe, then use the Pokédex to catch all 151 Pokémon.





POKÉMON CONQUEST

YEAR: 2012 **SEQUELS:** 0

■ Quite possibly the strangest *Pokémon* game we've played, but a good one to boot. *Pokémon Conquest* is a kiddie-friendly strategy game that splices the popular franchise with Tecmo Koei's *Nobunaga's Ambition* series. It works surprisingly well with the player travelling the Ransei Region, battling Pokémon, warriors and warlords in a bid to unite the region as one nation. It's a vastly different RPG compared to the usual games and offers plenty of tactical play, while its weird crossover status should ensure it becomes quite rare in later years.

POKÉMON MYSTERY DUNGEON

YEAR: 2005 **SEQUELS:** 4



■ The big hook of *Mystery Dungeon* was that it was the first time you could properly play as Pokémon. The fact that its two versions let it link between the Game Boy Advance and DS didn't make it too shabby either. For those unaware, it's effectively Game Freak's spin on the rogue genre, with Pikachu and pals exploring popular locations from the series and taking part in turn-based battles. While easier than most examples of the genre, it's still quite tricky in places and link-up with both versions is crucial if you want to gain access to all the available Pokémon.

POKÉMON RANGER

YEAR: 2006 **SEQUELS:** 2



■ Trust Nintendo to make drawing patterns interesting. Unlike previous *Pokémon* games, *Ranger* requires you to capture Pokémon by drawing specific circles around them. It's clearly used as a justification for the DS's unique control system, but it admittedly works well, getting quite challenging on later stages. Unfortunately, while the mini-game-based capture sections are good fun, the main adventuring is pretty dull and feels quite light compared to typical *Pokémon* adventures.

POKÉMON DASH

YEAR: 2004 **SEQUELS:** 0

■ The best thing about this DS launch game was its ability to link up with GBA versions of the available Pokémon to create new courses to race on. Unfortunately, that's the only thing this insipidly dull game has going for it. Racing Pokémon through checkpoint-based courses sounds great fun, but the reality is vastly different due to incredibly bland track design and overly simplistic gameplay. Pikachu runs in whichever direction you swipe, which is as dull as it sounds, while a variety of different terrains and power-ups attempt to inject some entertainment into Ambrella's game.



» [DS] While 3D visuals made their debut in *Diamond* and *Pearl*, the presentation was little changed.



Pokémon *Diamond* and *Pearl* brought a raft of changes for fans to enjoy, many of which were by now series standards. The game took place in the brand new Sinnoh region, a large island bisected by a long mountain range. Eight new gym leaders and a new Elite Four were available to battle, and 107 new Pokémon were added for players to catch, bringing the complete total up to 493. The battle system was also further refined, with many attacks reclassified as physical or special based on how they operated – for example, Volt Tackle became a physical attack as it involves one Pokémon making contact with another, while Shadow Ball doesn't and therefore became special. However, the most exciting new possibilities were a direct result of the series' move to a new platform.

For a start, the DS was Nintendo's first handheld platform to be designed for 3D graphics, which had the potential to revolutionise the way the games were presented. However, *Diamond* and *Pearl* were relatively tentative steps into 3D – battles received an improved set of 2D sprites so only the environments were overhauled in 3D, and they rarely offered much functional difference to their 2D counterparts. Still, they did allow for some surprising new design possibilities, as Junichi recalls: "One of the great things about moving to the 3D environments with the DS games was that we could do a lot more dynamic presentation, for example moving the camera around freely. It's kind of hard to explain, but being able to control the camera actually changes the


» [DS] Pokémon can follow you outside of their Poké Balls in the fourth-gen games, a feature that debuted in *Yellow*.

THE UNLIKELY LADS

Some Pokémon that are freaky, unnatural and downright impossible

MAGCARGO

■ With a body temperature stated to be over 18,000 degrees Fahrenheit, this Pokémon is absolutely incredibly hot. How hot? Almost twice as hot as the surface of the sun, which reaches only 9940.73 Fahrenheit, fact fans…

SPOINK

■ This pig-like creature has a rather unfortunate life – if it ever stops bouncing on its springy tail, its heart will stop beating. That's right, it dies. We prefer a Tigger-esque state of compulsion to a life or death situation, frankly.

TRUBBISH

■ It's a bin bag! More specifically, it's a bin bag with tie-top ears, a broken glass mouth and arms that look like spilled waste, formed from a chemical reaction within domestic and industrial waste. This makes perfect sense, of course.

YAMASK

■ This ghostly Pokémon retains memories of its former life, as well as a mask it occasionally looks at while weeping. Oh yes, and these guys are human ghosts – so what awaits you in the afterlife, it seems, is captivity. Sweet dreams.

VANILLITE

■ Created by British designer James Turner, Vanillite is a Pokémon which strongly resembles an ice cream cone. In fact, its snowy topping can be made to melt, exposing a bald, icy head. It gains extra scoops as it evolves, too.



▶ balance of the game quite a bit." In *Diamond* and *Pearl*, you can see this best in the design of the gyms – for example, a low camera angle in Eterna Gym allows trainers to hide behind trees.

The other massive change was the addition of online connectivity. The DS was Nintendo's first real foray into online gaming, and Pokémon was a key part of the software supporting the move. For the first time ever, players with access to a wireless internet connection could battle and trade their Pokémon without being in close proximity to one another, and without the need for additional peripherals. It was a huge step forward for players looking to complete their collections and prove their teams against trainers worldwide. However, the advent of online play meant that nobody ever needed to leave their home to catch 'em all. It's at this point that creating a main series Pokémon game for home consoles might have seemed most appealing, and it's something fans have often requested. However, Junichi sees things differently.

"One of the reasons that we continue to feel that handheld platforms are the best place for *Pokémon* is that with a handheld platform, you can take the game with you. We really like to focus on creating incentive for people to meet up with each other in real life. For example, if there's a special Pokémon distribution, people will go to meet each other and fans will talk… about the games. Creating that kind of atmosphere, kind of like a festival, is something that we really like with the *Pokémon* games. Obviously you can also play them at home alone now, and that's another way to play, but being able to do both of them is one of the best parts of being on a handheld platform."

It's an understandable position, especially as the handheld games continue to perform so well. *Pokémon Diamond* and *Pearl* sold a combined 18 million and were followed by an enhanced third version in 2008, *Pokémon Platinum*. A fifth generation of games was on the way, but once again a remake project would serve as an interlude. *Pokémon HeartGold* and *SoulSilver* remade *Gold* and *Silver* as full fourth-generation *Pokémon* games, with brand new visuals and all of the system changes that had been implemented. They also came bundled with the Pokéwalker, an LCD toy that allowed players to transfer their Pokémon from the cartridge via an infrared link and raise their stats simply by walking around. The

» [DS] Legendary Pokémon are typically encountered only once, disappearing if you knock them out or fail to catch them.

Eusine: Take a look at it!
SUICUNE is waiting for you!

PokéFacts
STRONGEST/WEAKEST ATTACK POKÉMON:
DEOXYS: 230 | IGGLYPUFF: 15
(Base stat)


» [DS] Gym layouts have become increasingly elaborate in recent games – even remade ones like this example gain some new tricks.


» [DS] Unova's urban design was inspired by metropolises such as New York, with tall buildings and subway tunnels.



» [DS] The urban regions of *Black* and *White* look more realistic, thanks to less grid-based map design.

device also allowed players to obtain items and catch extra Pokémon, but was sadly not compatible with future games in the series.

The fifth generation of games, launching with *Pokémon Black* and *White*, was in some ways a radical departure from previous entries in the series. "The main goal with *Black* and *White* was to make the same experience for existing *Pokémon* fans as well as brand new players," explains Junichi, "so everyone playing the game would experience the same surprises and joy." In practice, this meant that for the first time in the series, the only Pokémon players could encounter were the new ones. It was a welcome change for fans who had experienced over a decade of caverns filled with Zubats and Geodudes, and older Pokémon once again became available after the Elite Four were beaten.

Other improvements were also seen. The new Unova region, an urban area inspired by the state of New York, was the best-looking yet thanks to improved 3D visuals and map designs that were no longer constrained to grids as in previous games. Seasons now passed as well as time, though at an accelerated rate of one per month, and Pokémon contests were replaced with the upgraded Pokémon musicals. There was also a Pokémon Dream World feature, which enabled Pokémon to be sent to the internet to obtain otherwise unobtainable Pokémon. This feature has sadly been closed.

Over 15 million copies of *Pokémon Black* and *White* were sold following the games' release in 2010, marking another success and ensuring the production of the now-traditional enhanced version. However, one more surprising break with tradition was left: a traditionally numbered sequel. "With *Black* and *White*, a lot of things from a story perspective were left unfinished, some of which were done on purpose. A lot of the staff really wanted to revisit those and tie up some of the loose ends," Junichi recalls. "I remember at the time a lot of people were expecting a *Pokémon Grey* to come out, but I knew originally that I wanted to put out two versions for the game that came after *Black* and *White*, as we had a lot of ideas we wanted to implement with that – two versions, we'd set the story two years later, and with various other elements of 'two' we thought we'd put that in the name." The games boasted greater differences than previous enhanced versions, with a substantially different story and new locations.


» [3DS] Old Pokémon like Mewtwo have been updated for the first time in generations, due to the new Mega Evolutions.

> "We really like to focus on creating incentive for people to meet up with each other in real life"
>
> Why the main series sticks to handheld systems, according to Junich Masada

Pokémon Black 2 and *White 2* were the swansong of the Nintendo DS, which had already been superseded by the 3DS when they were released in 2012. Nintendo's latest handheld saw its first major *Pokémon* release late in 2013, with *Pokémon X* and *Y* marking the series' first simultaneous worldwide release. Battles now take place with full 3D visuals of the kind previously seen in console games like *Pokémon Stadium*, and players are finally set free from four-way grid movement. A new Fairy type has also been added, in order to balance the previously strong Dragon type.

But the biggest change concerns Pokémon evolution. "One of the reasons why people like Pokémon is the fact that they evolve, so we wanted to think of a way to make this even more appealing," says Junichi, "so I discussed this with the battle system designers, the graphic designers and we came up with the idea of a Mega Evolution that would take place just during the battle."

» [3DS] *Omega Ruby* and *Alpha Sapphire* introduce the Soar mechanic, providing impressive views of Hoenn.

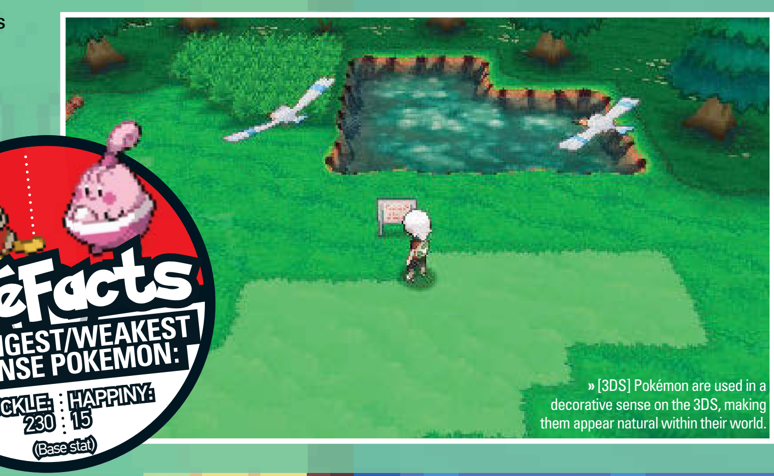


Previously, Pokémon could only change forms by evolving outside of battle. The new Mega Evolutions require Pokémon to be given Mega Stones to hold and they only happen during battle, reverting once the fight is over. "I really like Charizard, and I also like the Mega Evolutions of Charizard, but if it stayed like that I'd miss the old Charizard," he explains, offering some insight into why the Mega Evolutions are temporary.

With *Pokémon X* and *Y* enjoying strong sales, it's something of a surprise that the latest remake project has arrived so quickly. *Pokémon Omega Ruby* and *Alpha Sapphire* arrived to critical acclaim in November 2014 and were directed by Shigeru Ohmori, who started as a map designer on the original *Ruby* and *Sapphire*. We've already noticed some striking new features in the new games. "One of the things is that you'll actually hear Pokémon cries as you're walking around the environment," Shigeru tells us, "but we wanted to go more in-depth with that and actually have Pokémon appear in the game world. For example, you'd see their silhouette or a Pokémon flying overhead." This isn't just an aesthetic change – you can now identify Pokémon sticking out from the tall grass and even pre-identify their level and moves, marking the first move away from random battles.

If you've only ever experienced *Pokémon* passively, it's easy to write the series off as a late-Nineties kids fad, but this is a flawed perspective – with the original kids now grown up and still playing, the continued multimillion sales of the series rest on more than trends. You can see brand loyalty driving fan projects like Twitch Plays Pokémon, in which thousands of players collaborated in a chat room to complete *Pokémon Red* on a live stream. The truth is that the *Pokémon* games inspire that loyalty among fans because they're deceptively deep RPGs, with battle systems that have been stretched by dedicated players and multiplayer features that truly bring players together. In the age of online gaming, a game that can still pack players into the same room is a real retro classic – and that's exactly what *Pokémon* is. ✱

PokéFacts
STRONGEST/WEAKEST DEFENSE POKEMON:
SHUCKLE: 230
HAPPINY: 15
(Base stat)


» [3DS] Pokémon are used in a decorative sense on the 3DS, making them appear natural within their world.

TOP 25 ZX81 GAMES

As the machine that introduced affordable computing to the British public, the ZX81 holds a special place in many gamers' memories. Nick Thorpe counts down the best games on Sir Clive Sinclair's groundbreaking machine – did your favourite make the cut?



City Patrol

DEVELOPER: Don Priestly
YEAR: 1982 **GENRE:** Shoot-'em-up

25 When you're thinking of visually impressive ZX81 games, *City Patrol* is a name that needs to be near the top of the list. The game's scrolling cityscape not only makes excellent use of the computer's character graphics, but delivers multiple layers of parallax to show the depth of the city you're fighting to protect. This greatly enhances suspension of disbelief as you try to avoid levelling any skyscrapers while you duel with your alien foe.

ZX Galaxians

DEVELOPER: Artic **YEAR:** 1982 **GENRE:** Shoot-'em-up

24 The ZX81's unofficial conversion of Namco's arcade hit is not quite the most authentic out there, but it certainly offers some frenetic shooting that doesn't let up for even a second. Unlike the arcade game on which it is based, *ZX Galaxians* features random attack patterns for its enemies, ensuring that players are kept on their toes while dealing with the alien menace. The side-bar featuring play instructions as well as score, high score and lives displays is a nice presentational touch, too.

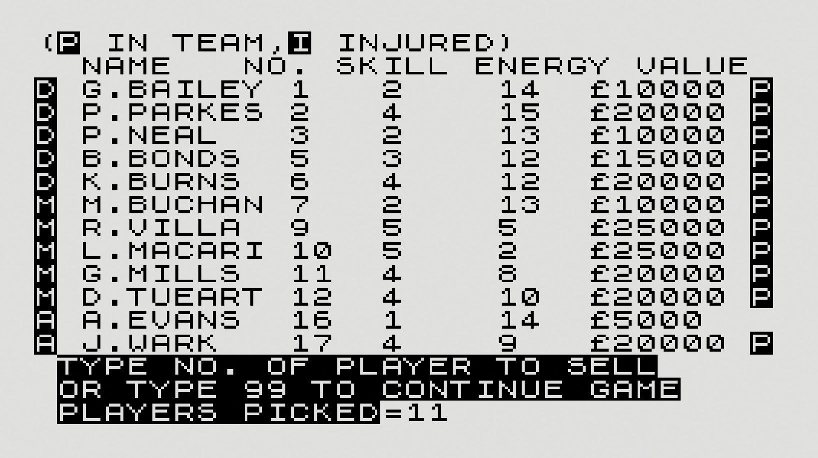




Damper/Glooper

DEVELOPER: MP Crane **YEAR:** 1983 **GENRE:** Maze

23 Quicksilva's excellent double pack featured two unofficial conversions of arcade maze game hits *Amidar* (*Damper*) and *Pac-Man* (*Glooper*). Both games feature highly responsive controls and are rather faithful to the arcade originals – in particular, *Glooper* replicates the arcade maze layout of *Pac-Man* perfectly, which was not a common achievement in the early Eighties.



Football Manager

■ **DEVELOPER:** KEVIN TOMS ■ **YEAR:** 1982 ■ **GENRE:** SPORTS

22 The ZX81 was a humble machine even in its day, and its limitations posed some real challenges to developers. For example, how would you represent a football match on the machine? It would struggle to differentiate teams thanks to its visual quirks, and shifting the multitude of moving objects inherent to football was not one of the machine's strengths. Kevin Toms' vision neatly sidestepped these issues by shifting the player's control. Instead of taking control of a player, as in previous sports games, *Football Manager* allows you to fill the role of the man in the dugout.

While the game's limits can be found quite early on, the gameplay present is certainly compelling. As manager, you're able to take control of one of 32 league teams and select your squad, hire and fire players, balance the budget, and manage injuries. Your team is rated on various criteria and your performance as a manager is also under scrutiny. The text-based interface is very functional and keeps the game moving along briskly.

All of this would be for naught if the matches lacked the tension and drama of real football, but the live text readout replicates this perfectly – with each new line promising a goal, you'll constantly be hoping that the final one reads in your favour, but you can never know for sure. It's for that reason that the Addictive Games moniker was appropriate – *Football Manager* is not only a truly innovative piece of software, but one which uses time-tested techniques to hook players just as effectively as any of the many games which followed in its footsteps.

Night Gunner

■ **DEVELOPER:** Digital Integration
■ **YEAR:** 1982 ■ **GENRE:** Shoot-'em-up

21 As the rear gunner in a bomber under attack, it's your job to take out enemy planes in order to stay alive. This means moving your crosshair from a first person perspective to shoot down the endless stream of bogeys as quickly as possible, with points available for quicker hits. While the game's visuals are sparse, it's clear to see that the developer had the capabilities of the ZX81 in mind both when creating them and the setting that justifies them. It's a very good piece of software, and one which we suspect would have gone rather higher on the list had it not been for the similar first-person shooting game in the top ten…

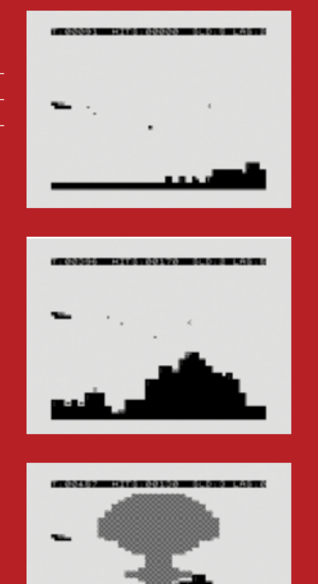


Avenger

■ **DEVELOPER:** Kevin Flynn
■ **YEAR:** 1982 ■ **GENRE:** Shoot-'em-up



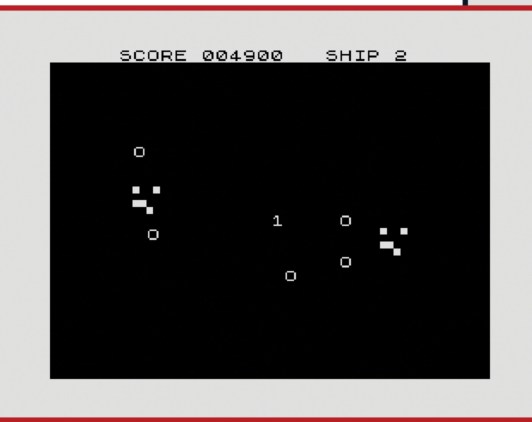
Scramble was certainly a popular game to clone in the early Eighties, and *Avenger* is definitely one of the ZX81's better efforts. The key to this is in its additions to the original formula. *Avenger* offers the usual laser fire and bombs that are common to *Scramble* and its other variants, but adds an additional wrinkle in that your laser can overheat with prolonged use and become unusable. Additionally, atomic power stations are found on the surface of the planet. While most buildings are there to be blown up, these are to be avoided as they'll blow up the planet in a giant mushroom cloud. While there are prettier clones of *Scramble* on the ZX81, few of them require the restraint and thought that *Avenger* demands of its players.



QS Asteroids

■ **DEVELOPER:** Quicksilva ■ **YEAR:** 1982 ■ **GENRE:** Shoot-'em-up

19 This unofficial ZX81 conversion of Atari's hit really ticks all the right boxes, and works particularly well on the format due to the monochrome visuals of the original. While you don't have the same degree of control as in the arcade game – you're limited to eight directions, rather than 360 degree movement – the game is a faithful version. Asteroids split as you'd expect and movement is swift enough to allow you to avoid danger. The only downside is that while the game looks excellent if you're using the QS Character Board add-on, players that don't have it are faced with a rough-looking game in which you pilot numbers, rather than an actual spaceship.





Fungaloids

■ **DEVELOPER:** Michael Orwin
■ **YEAR:** 1982 ■ **GENRE:** Shoot-'em-up

18 Arriving on Michael Orwin's compilation tape *Cassette Four* alongside clones of games such as *Space Invaders* and *Scramble*, *Fungaloids* overshadows the other games in the package due to its high quality and its surprising originality. The basic goal of the game is to manoeuvre your flyer over the tops of the ever-growing fungaloids, bombing them into the ground. However, they can retaliate by firing dangerous spores, which not only damage your craft but block bombs too.

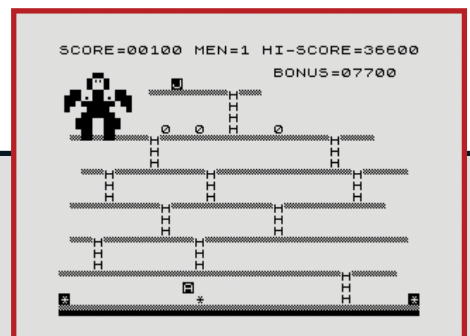
As well as having to manage the fungaloids themselves, you will need to keep a close eye on your flyer's supplies, as it can only carry a limited amount of fuel and ammunition. As a result, balancing regular resupply runs with fungaloid management is the key to success in this game. It's not a pretty ZX81 game by all accounts, but it's one of the most original arcade-style games to appear on the platform.

Krazy Kong

■ **DEVELOPER:** CP CULLEN
■ **YEAR:** 1982 ■ **GENRE:** PLATFORM

17 Between the limited American impact of the ZX81 and the US-centric licensing of arcade games in the early Eighties, Sinclair's machine received few official versions of major arcade hits like *Donkey Kong*. Luckily for owners of the computer, enterprising coders were up to the task of creating unofficial clones – and in the case of games like *Krazy Kong*, they could be rather faithful.

Krazy Kong features all the barrel-jumping and fireball-dodging of the arcade game on which it was based, with a few notable concessions, including straight floors and no hammers with which to turn the tables. However, after that first stage things begin to deviate with some more original level design concepts that distinguished the game from its inspiration. While it would win no awards for overall originality, *Krazy Kong* perfectly satisfied the desire for an action platformer amongst ZX81 owners.

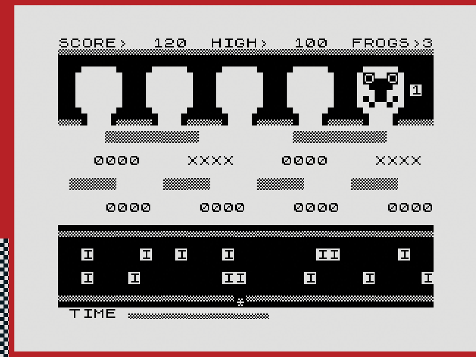


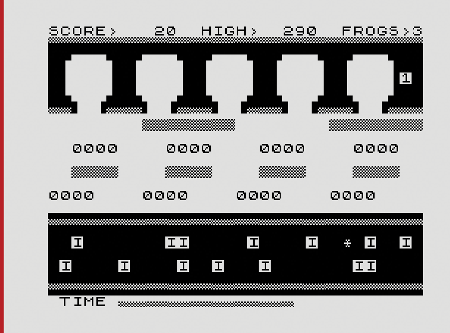
Froggy

■ **DEVELOPER:** David and John Looker ■ **YEAR:** 1982 ■ **GENRE:** Action

16 Here's a case study in the benefits of working to a platform's strengths. Two ZX81 games were released under the name of *Frogger* – DJL Software's unofficial version, which was later retitled *Froggy* and is the game that makes this list, and the Cornsoft version which carries an official licence from Sega and was released via Timex in North America. The latter version was largely concerned with retaining visual fidelity, and broke the game screen into two distinct sections in order to draw detailed sprites. Unfortunately, this flick-screen approach never felt quite right as the playfield felt too rather too narrow.

The DJL Software version recognises that the ZX81 isn't best suited to an accurate recreation of the arcade game's visuals, and instead concentrates on preserving the overall game design, retaining the single-screen format of the arcade game and the full five berths for safe frogs. As such, while it looks very much like that you are playing as an asterisk, the sense that you are actually playing *Frogger* is much greater. It just goes to show that an official licence does not strictly guarantee a superior product.





The Ship Of Doom

■ **DEVELOPER:** Artic ■ **YEAR:** 1982
■ **GENRE:** Adventure

15 The ZX81 was well equipped to handle text adventures, and *The Ship Of Doom* was a classic. Your goal is to free yourself from the alien cruiser which has captured you, lest you become a slave and have your brain replaced with a microchip.

Trader

■ **DEVELOPER:** Pixel ■ **YEAR:** 1982
■ **GENRE:** Adventure

14 This mammoth space trading adventure offered players the chance to deal in fuel, food, building materials and even narcotics across the moons of Meridien. Even with the 16K RAM pack attached, the game was so large that it had to be loaded in three parts.

QS Invaders

■ **DEVELOPER:** Quicksilva ■ **YEAR:** 1982
■ **GENRE:** Shoot-'em-up



13 Another of Quicksilva's high quality unofficial arcade conversions, this one being of Taito's hit *Space Invaders*. The game features enhanced graphics for the invaders and the player cannon when used with the QS Character Board, but plays perfectly well without it.

Espionage Island

■ **DEVELOPER:** Artic ■ **YEAR:** 1982
■ **GENRE:** Adventure

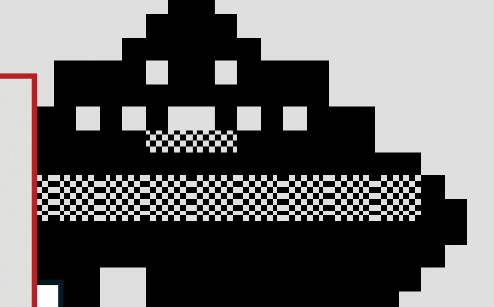
12 Players were able to test their mettle with this text adventure, which saw the player searching for a secret on an island. The length of the adventure required the ability to save the game, in order for players to take breaks.

Black Crystal

■ **DEVELOPER:** Carnell Software
■ **YEAR:** 1982 ■ **GENRE:** RPG



11 Set out on a quest to destroy the titular gem, while picking up keys and confronting dragons across six maps. This RPG provided many players with their first experience of the genre, and is enthralling despite being a tough cookie.





1K ZX Chess

■ **DEVELOPER:** David Horne ■ **YEAR:** 1983 ■ **GENRE:** Strategy

10 The unexpanded ZX81 is an incredibly difficult machine to write games for due to its severely limited memory, but David Horne managed to pull off the seemingly impossible with *1K ZX Chess*. The game offers not only a relatively complete game of chess (excluding castling, pawn promotion and en passant captures) but also an AI opponent and automatic rules checking. The implementation of chess is incredibly sound for such a small program, and amazingly the computer opponent plays a reasonable game. It might not be much to look at, with pieces represented by letters alone, but *1K ZX Chess* is an extraordinary technical achievement and a truly enjoyable game. It might well be the very best thing that can be done on a ZX81 without a RAM pack.

Invasion Force

■ **DEVELOPER:** Simon Wadsworth ■ **YEAR:** 1982 ■ **GENRE:** Shoot-'em-up

9 While at first glance *Invasion Force* resembles the arcade classic *Phoenix*, in no small part thanks to the big mothership hovering at the top of the screen, it's a rather different proposition. Two enemies and a forcefield attempt to prevent the destruction of the boss enemy, and while damage to the forcefield is permanent you can only temporarily dispatch the smaller enemies.

Once the defences have been penetrated, the mothership itself can be attacked, but the solid black parts of the forcefield are indestructible and will repair the mothership when hit. You will need to be sparing with your shots as a result, with a rhythmic firing pattern yielding far greater results than mindless blasting. The quicker you can take down the boss, the more bonus points you'll earn. While *Invasion Force* isn't the prettiest of ZX81 games, it makes up for it with considered, compelling, and overall fun shoot-'em-up design.





QS Scramble

■ **DEVELOPER:** Quicksilva
■ **YEAR:** 1982 ■ **GENRE:** Shoot-'em-up

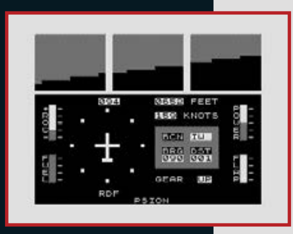
8 Quicksilva did some good business on the ZX81 with its unofficial arcade conversions, and *QS Scramble* is the one that keeps us coming back. The shooting and bombing in Konami's original arcade game was always compelling, and Quicksilva captured it with authenticity on the ZX81 by providing responsive controls and well-matched gameplay.

Much like *QS Asteroids* and *QS Invaders*, *QS Scramble* supported Quicksilva's custom add-on boards to push the limitations of the machine, with the character board providing enhanced visuals and support for the sound board. They weren't cheap, as by the time you'd bought both plus the required motherboard you'd have spent enough to buy another ZX81, but the results were convincing. However, the game ran fine without the add-ons.

Flight Simulator

■ **DEVELOPER:** Psion ■ **YEAR:** 1982 ■ **GENRE:** Simulator

7 A formative experience for many ZX81 owners due to its wide availability, *Flight Simulator* presents a remarkably complete flying experience. The screen consists of a variety of instruments which display your plane's status, as well as a view of the horizon. You are able to control most aspects of flight beyond the direction, but keep in mind that incorrect usage will result in disaster, It's even possible to toggle the use of wind effects, to provide a more complete experience.



Booster

■ **DEVELOPER:** Software Farm ■ **YEAR:** 1985 ■ **GENRE:** Platform

6 The last of Software Farm's high-res games for the ZX81 was the follow-up to *Rocket Man* that many players wanted. Players were tasked with using their jetpack to ferry items across a screens filled with deadly enemies, drawn with detail thanks to the developer's high resolution routines. Sadly, players who were using the ZX81 by 1985 missed this rare mail order game, as Software Farm's distributor had collapsed and the rest of the distribution market was focusing on newer machines.

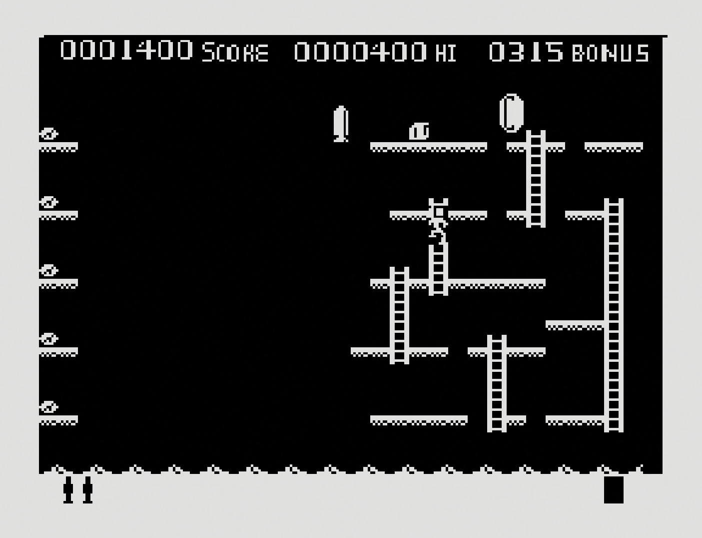


3D Defender

■ **DEVELOPER:** JK Greye
■ **YEAR:** 1981 ■ **GENRE:** Shoot-'em-up

5 It might be tricky to get the hang of this fast-paced blaster, but it's worth it. Placed in the cockpit of a spaceship defending Earth from an alien menace, your goal is to shoot down as many of the invaders as possible. While the absolutely enormous UFO enemies dominate the screen as they fly toward you, the real surprise is how swiftly they move and how smoothly animated the explosions are when contact is made. Thanks to mastery of ZX81 machine code, *3D Defender* become one of the standard bearers for graphics on the system, along with other early releases from JK Greye Software.





Rocket Man

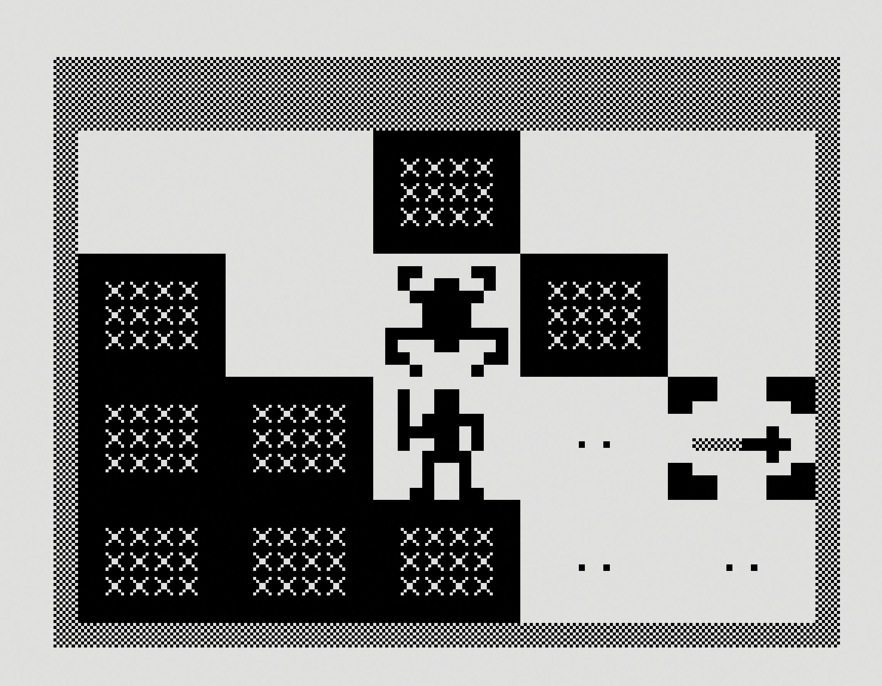
■ **DEVELOPER:** Software Farm ■ **YEAR:** 1984 ■ **GENRE:** Platform

4 Having firmly established its value as a ZX81 publisher by introducing its high-res range with *Forty Niner*, Software Farm's follow-up was highly anticipated and didn't disappoint, blending parts of *Donkey Kong* and *Jetpac* to create a rather unique game. *Rocket Man* is a single-screen platformer which requires you to gather fuel and a rocket pack in order to cross the water and collect diamonds, while avoiding a strange bubble that relentlessly pursues the player. It actually reminds us somewhat of the Rover from the mind-bending TV series *The Prisoner*.

Mazogs

■ **DEVELOPER:** Don Priestly ■ **YEAR:** 1982 ■ **GENRE:** Maze

3 With enormous sprites and amusing cartoon fights, *Mazogs* is a firm favourite of ours. The goal of navigating the maze amay seem simple, especially given the presence of prisoners that help you find your way, but it's complicated by the presence of the Mazogs themselves. Given that you only have a 50% chance of winning a fight with them unarmed, you'll need to find swords to take them out. But with the move limits present on higher difficulties, you'll need to know when to take a risk.

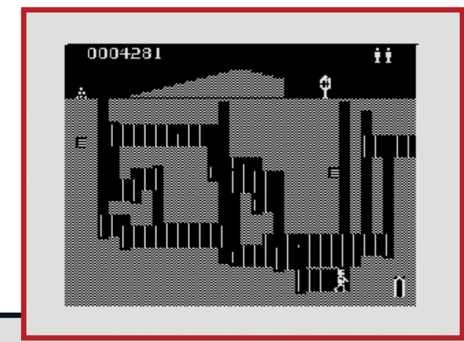


Forty Niner

■ **DEVELOPER:** Software Farm
■ **YEAR:** 1983 ■ **GENRE:** RPG

2 Ushering in a graphical revolution for ZX81 games, *Forty Niner* used a rather clever programming trick to break the system's limitations. The result was that unlike previous games, which largely drew graphics in an extremely low resolution or with creative use of the ZX81's pre-defined characters, Software Farm was able to utilise custom visuals while maintaining a relatively high resolution output.

Forty Niner is mostly commonly remembered for this graphical achievement, but it also offered some fine arcade gameplay. Your goal is to mine for gold nuggets while avoiding giant rats, which can be killed by releasing the snakes which are found dotted around each stage. You only have a limited time to complete this task, however, thanks to the gremlin that eats through the mound of earth at the top of the stage before coming to find and eat you!



retro GAMER READERS' CHOICE

3D Monster Maze

■ **DEVELOPER:** Malcolm Evans ■ **YEAR:** 1982 ■ **GENRE:** Maze

1 Sometimes these top 25 lists are wide open affairs, with a huge number of potential winners, but most are more predictable and offer only two or three possible winners. However, the real rarity is a platform on which one game overshadows everything else, and the ZX81 is just such a platform. It's an obvious name sitting atop our list, but there's a reason it's a predictable choice – *3D Monster Maze* deserves the accolade.

With so many maze games available in the early years of videogaming, *3D Monster Maze* needed very distinct selling points. The first of these is the game's effective method of building tension. While the presence of a single enemy might sound quaint given that you face four in *Pac-Man*, your restricted viewpoint gives you much less information to work with in avoiding it. All that you have to go on is the game's warning system, which provides you with ominous messages such as "Footsteps approaching" and "He is hunting for you" – ironically, these were intended to prevent any shock to the player.

The game's first-person 3D visuals didn't just enhance the gameplay by obfuscating the titular monster and dead ends – they were an important selling point. On a system which struggled to display complex images, *3D Monster Maze* exhibited impressive visuals of a kind rarely seen at the time on any platform. The biggest attraction was of course the Tyrannosaurus Rex itself, an enormous beast that occupied your entire view of the maze, shortly before you became a light afternoon snack for the prehistoric predator.

Of course, *3D Monster Maze* is important beyond the play value it provides. First-person 3D mazes were not at all common in the early Eighties, but would become widely used later in the decade and into the Nineties, by games as diverse as *Dungeon Master* and *Wolfenstein* 3D. The latter was the first step towards the establishment of the first-person shooter as a popular genre, with *Doom* later picking up the mantle. While the maze aspects of the genre have been downplayed in many of today's more popular series, which seem to favour straightforward linear corridor designs, the introduction of a maze with an autonomous enemy is still a very important evolutionary step in one of the most-played genres of games.

3D *Monster Maze* demonstrates a variety of qualities which make it very tough to argue against its placing at the top of this list. It displays clear technical mastery of the machine on which it runs, provides one of gaming's most memorable antagonists and has an enviable legacy. However, the most important thing is that it is still a whole lot of fun to play – despite the occasional incredibly stressful moment when the Tyrannosaurus Rex is heading straight for you.

Five Reasons Why It's Great

1 *3D Monster Maze* has one of gaming's most enormous and memorable adversaries.

2 It does some really amazing things, despite running on very humble hardware.

3 Very few games can lay claim to such a proud design legacy.

4 Legitimate scares in games are few and far between, but *3D Monster Maze* nailed it early.

5 The on-screen messages heighten the atmosphere considerably, and are now rather iconic. "Footsteps approaching" indeed…

THE HEALTH AND SAFETY
OF THE ADVENTURER WHO
ENTERS HIS REALM.THE
MANAGEMENT ADVISE
THAT THIS IS NOT A
GAME FOR THOSE OF A

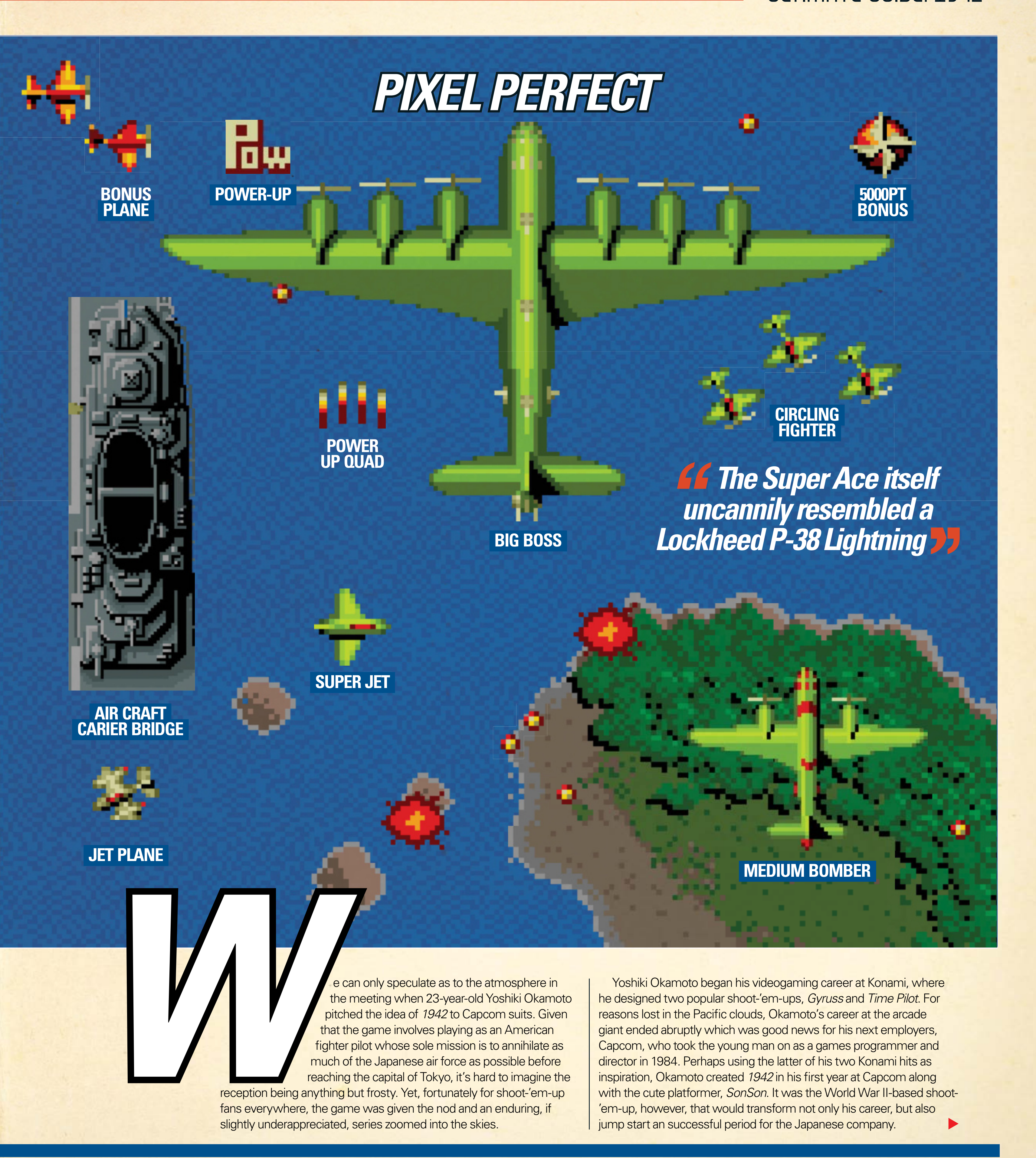
NEW GENERATION SOFTWARE
COPYRIGHT M.E.EVANS







ONE OF A REVERED GROUP OF GAMES THAT HELPED PROPEL CAPCOM INTO THE BIG TIME BACK IN THE MID-EIGHTIES, 1942 HAS SINCE PROVED TO BE AN ENDURING SERIES. SO BUCKLE UP AND JOIN YOUR CO-PILOT, GRAEME MASON, AS WE LOOK BACK AT THE ORIGINAL WORLD WAR II ARCADE GAME. OUR DESTINATION: TOKYO



"The Super Ace itself uncannily resembled a Lockheed P-38 Lightning"

We can only speculate as to the atmosphere in the meeting when 23-year-old Yoshiki Okamoto pitched the idea of *1942* to Capcom suits. Given that the game involves playing as an American fighter pilot whose sole mission is to annihilate as much of the Japanese air force as possible before reaching the capital of Tokyo, it's hard to imagine the reception being anything but frosty. Yet, fortunately for shoot-'em-up fans everywhere, the game was given the nod and an enduring, if slightly underappreciated, series zoomed into the skies.

Yoshiki Okamoto began his videogaming career at Konami, where he designed two popular shoot-'em-ups, *Gyruss* and *Time Pilot*. For reasons lost in the Pacific clouds, Okamoto's career at the arcade giant ended abruptly which was good news for his next employers, Capcom, who took the young man on as a games programmer and director in 1984. Perhaps using the latter of his two Konami hits as inspiration, Okamoto created *1942* in his first year at Capcom along with the cute platformer, *SonSon*. It was the World War II-based shoot-'em-up, however, that would transform not only his career, but also jump start an successful period for the Japanese company.

1942



HOW TO PLAY

Your guide to becoming a flying ace

1 

Shoot down all of these crimson planes and a useful power-up is dropped, from quad shot to a brace of wingtip colleagues. Be warned, though: don't get sucked too far up the screen trying to take these guys out or you'll be a in a whole world of pain.

2 

You get three loop-the-loops per level and don't forget them as they are vital for escaping sticky situations. On later levels it's worth keeping one in the bank as there are a couple of plane formations that can only be avoided with this nifty stunt.

3 

Sticking to the bottom of the screen is a hazardous tactic with various enemy bombers and fighters frequently zooming up behind you. Fortunately they don't fire until they are in front of the Super Ace.

4 

This bomber arrives from behind the player and takes up a large part of the screen. It's not troublesome on its own, but you want to take it down before enemy fighters start buzzing around it.

5 

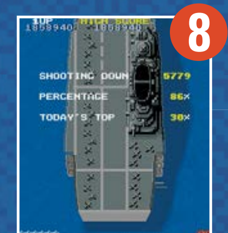
This behemoth appears periodically throughout the stages and spits a mass of bullets at you. You can avoid these using loops or ducking just to the left or right of its gargantuan wings.

6 

Make sure to grab a power-up whenever they appear on the screen, These can range from a four-shot (or quad shot) gun, a powerful smart bomb, additional wing men, extra loops and even an handy extra life.

7 

Here's a useful trick with the bonus wingmen. While they are useful, their life span is extremely limited due to the increased target size they represent. So you might as well use them to smash and destroy the tougher multi-hit planes.

8 

1942 uses percentages to calculate the bonuses at the end of the stage. Each shot is counted and the hit-to-miss ratio is used to determine the points awarded. Achieve 100% and a special bonus of 50,000 points is granted.

9 

One wingman is good, two wingmen is not so good. Despite the lesser firepower, the combination of Super Ace plus one wing man represents the best ratio of weaponry to your overall target size.

10 

Notice that lone small plane that slowly edges its way onto the screen from the lower left or right of the screen? Shoot this guy and it drops a strange symbol which grants a 5000 point bonus.

1942 took the template laid down by Namco's *Xevious* and transferred the plot and graphics to a World War II setting with the player's aircraft, and many of the enemy planes, inspired by real-life counterparts. This was a huge deal at the time, giving *1942* a layer of authenticism and realism that simply wasn't seen in other shooters. While Konami, Irem and others were obsessed with deep space, Okamoto decided to ground *1942* in realism. Fantasy realism admittedly, but realism nonetheless, and it worked exceptionally well. The Super Ace itself uncannily resembled a Lockheed P-38 Lightning, while the pale colours of the Mitsubishi Zero can be discerned for the Japanese air forces. The lesser-known Kawasaki Ki-48 appears to have influenced the bomber that arrives frequently from the bottom of the screen, while the gigantic heavy behemoth that appears at the conclusion of four different stages would seem to have been inspired by a combination of two Nakajima aircraft. Both the G8N and G10N were designed by Japanese engineers with attacks upon the United States mainland in mind, but having been conceived in 1943, they never made it past prototype stages due to Japan's worsening situation in the war. The proposed armament for the G10N in particular made *1942*'s bullet-spitting plane not quite as far-fetched as it looked.

SEQUELS

We take a look at the rest of the 1942 franchise. Have you played them?



1943: THE BATTLE OF MIDWAY

■ ARCADE ■ 1987

While *1942* might win in the nostalgia stakes, there's no doubt *1943* is a superior game thanks to its health bar (instead of the frustrating one-hit system) and a improved selection of weapons, enemies and backdrops. The Super Joe also has a new array of supernatural powers such as cyclone, lightning and tsunami, there's also a co-op two player option and some decent tunes.



1943 KAI: MIDWAY KAISEN

■ ARCADE ■ 1988

Released only in Japan, and a year after *1943: The Battle Of Midway*, this game boasted updated graphics and sound design and it featured a totally different main plane; in fact, this time around it was an incongruous biplane. Western gamers eventually got to play *1943 Kai* thanks to the PlayStation compilation *Generations* but it definitely remains a bit of an oddity in the series.



1941: COUNTER ATTACK

■ ARCADE ■ 1990

As the name would suggest, this fourth game in the series is actually a prequel, with the action taking place a year prior to the original game. Beautiful, sleek graphics and challenging gameplay made *Counter Attack* a supreme entry in the series as the Super Joe shifted to the Western Front and those nefarious Nazis, this time aided by a British Mosquito aircraft in the two player co-op mode.



19XX: THE WAR AGAINST DESTINY

■ ARCADE ■ 1995

The series well and truly took the leap into the fantastical with this 1995 sequel which created its own fictional war as a back story. The player can now select different planes to fly (the Lightning and Mosquito from previous games and a new, faster but weaker plane), and thanks to an updated board (the CPS-2) the game also had a more distinctive look to the previous games.



1944: THE LOOP MASTER

■ ARCADE ■ 2000

The first game in the series not to be created in-house at Capcom, the *Loop Master* dispensed with the alternate timeline and also differed in style to its predecessor, harking back to the design of the original games. The charge shot remained, but in came the health bar and, released in 2000, the game was strictly old school, yet it was still rather popular in arcades.



1942: JOINT STRIKE

■ XBLA & PSN ■ 2008

While the title may suggest it's a remake of the original, *Joint Strike* is actually very different, justifying its inclusion in this section. Released digitally for the Xbox 360 and PlayStation 3, the game adopts a pseudo-3D effect but is not really any better for it, and lacks the charm of the arcade originals.

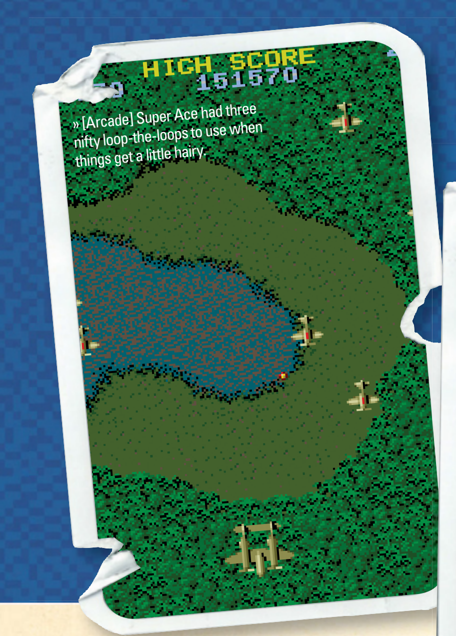


1942: FIRST STRIKE

■ iOS ■ 2009

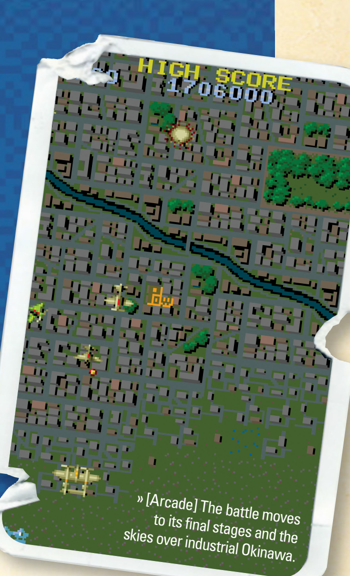
As with *Joint Strike*, this game was completely new, despite its title. Implementing a slower pace (made necessary by the awkward touch controls of mobile devices), the shooter proved particularly unsuited to the format and the graphics were dated. Still, the music is nice.





» [Arcade] Super Ace had three nifty loop-the-loops to use when things get a little hairy.

» [Arcade] Things look a little depressing upon nearing the mainland.



» [Arcade] The battle moves to its final stages and the skies over industrial Okinawa.

> "The action was fast-paced, driven by an incessant barrage of enemy planes and an infernal whistling sound"

Like the aforementioned *Xevious*, *1942*'s enemies attacked in waves and patterns with an occasional formation of red aeroplanes dropping power-ups if the entire phalanx was shot down. These varied from a quad shot to a useful smart bomb that destroyed all on-screen enemies, and two wingmen (together with the additional firepower). The Super Ace could also perform a handy loop-the-loop which rendered the plane temporarily invulnerable, thus gaining a couple of seconds to extricate it from a sticky situation. Like many arcade games before it, careful memorisation of the key moments when these abilities would come in useful was critical in attaining progression to the next stage.

Technically, *1942* was nothing special, and not a huge jump up from its famous sci-fi inspiration from two years earlier with its main CPU a 4 MHz Zilog Z80 chip and a screen resolution of 256x224. But the action was fast-paced, driven by an incessant barrage of enemy planes and an infernal whistling sound. Whether the latter was supposed to represent some sort of manic marching band or a drill sergeant's call, it formed a bizarre soundtrack to a game that was ▶

1942



CONVERSION CAPERS

The best and worst conversions of Capcom's classic arcade game



ZX SPECTRUM

■ Elite had forged an excellent reputation on the 8-bits thanks to its conversions of *Commando* and *Ghosts 'N' Goblins*, but it came a cropper with *1942*. Like the Amstrad version, it's on the sluggish side, and a lack of decent sound coupled with colour clash, a drab yellow background and some very hard to spot enemy bullets make it far from a classic.



AMSTRAD CPC

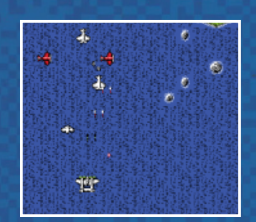
■ While it's reasonably playable, the Amstrad CPC port of *1942* is unsatisfying thanks to a slow pace that sucks much of the excitement from the game. Crunching sound effects redeem it slightly and it is at least possible to progress a fair way without cheating.

MSX

■ This version starts off impressively with a beautifully detailed aircraft carrier and the rest of the game is pretty nifty, too. Smart, authentic, graphics are complemented by a frantic tempo that mirrors the arcade, although it is perhaps a little *too* pacey for our liking. Despite some flickery sprites on occasion, this is a pleasant surprise and one of the better home computer ports.



> "1942 had a neat scoring system that rewarded players for accuracy as well as survival"





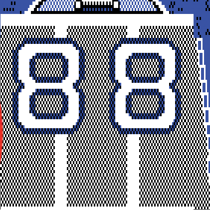


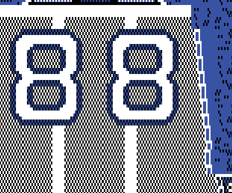
PC-88

■ NEC's PC-88 received an ambitious arcade conversion, and it's hard to recommend it. A limited colour palette (admittedly the sea looks very nice), slow jerky scrolling and some juddery sprites coalesce to make this a port of *1942* best consigned to history.

NES

■ A well-crafted difficulty curve and faithful graphics make the NES version a good effort. Like many conversions, it suffered by being released in 1986 when superior shoot-'em-ups were about and is also plagued by the horrible beeping from the original.





OTHER SYSTEMS

Capcom began delving into its back catalogue in 1998 and the first game to get the *Generations* compilation treatment was none other than *1942*. Including the direct and semi-sequels in *1943* and *1943 Kai*, it was a predictably accurate portrayal of the arcade originals available for the PlayStation and Saturn. It's also available on the *Capcom Classics Collection* for the Xbox and PlayStation 2.

FM-7 AND SHARP X-1

■ We've bundled these two in together as they're virtually identical in terms of graphics and gameplay. Like the PC-88 port, these Japanese computers lacked the graphic hardware to do *1942* much justice, and if we're being honest, they're not much fun.

calling out for an earthy and dramatic theme mixed with the heavy drone of the various aircraft on display. Backgrounds and enemies also varied little over the 32 stages. Green atolls eventually give way to larger, more industrial islands, and there's the appearance of two classes of fanciful jet fighters (including one type that appears based on an German-inspired prototype called the Kayaba Katsuodori). But generally *1942*'s air fleet of opponents and the ground below changes very little over the course of the game.

So why was it such a huge hit for Capcom? Perhaps it was the scenario, which was a novel one for the time, and the universal appeal of shoot-'em-ups. *1942* also had a neat scoring system that rewarded players for accuracy as well as survival, but generally its popularity, nostalgia aside, is a little bemusing. In the arcades it spawned a direct sequel in the imaginatively-titled *1943* which replaced the punishing (yet common) one-hit-and-you're-dead mechanic with a welcome life bar. *1943* was a far superior game, with more detailed backgrounds (including clouds for enemies to sneakily hide behind) and ensured the series would live on for some time to come. Home conversions of *1942* itself were inevitable, although the game was initially ignored as publishers sought to capitalise on Capcom's bigger subsequent

Q&A BOB BAFFY

We spoke to the man who took on this mission, of porting 1942 to the GBC…



How did you come to work on *1942*?
The market for the GBC was insane. Digital Eclipse were flooded with offers from publishers that wanted to capitalize on the new hardware. The result was a shortage of programmers, and I wanted to stretch a bit and see if I could do it. Up until that point I had mainly been involved with the art and the sound design.

It must have seemed odd, converting a game that was 15 years old at the time?
Actually Capcom wanted a conversion of the NES version of the game. I would have loved to have converted the arcade version, but the schedule was tight and it was looking to put out GBC versions of all its NES classics. The thought was that since the hardware was similar, it would be simple, but in reality it wasn't any easier as they had to be recreated from scratch.

How difficult was it adapting the game to the Game Boy Color's small screen?
There was a bit of adaptation needed. For example, the enemy patterns had to be edited not only because of the screen size, but to take into account that the player wasn't able to move as much. The boss plane was actually part of the background maps with invisible collision boxes and bullet spawn points designed to make it look like it was a giant sprite!

Sadly, the siren made it in…
I hated that beep sequence, I recall Capcom insisting it remained in. As a sound designer I would have loved to have written more music and sound effects, but again, time was not on our side.

So were you pleased with the final result in the end?
Not until several years later. Like any creative endeavour, you usually find yourself looking at the flaws. But now I look back with fondness, despite the stress. I did nearly everything myself on the game and was set to be married during its development as well! I don't think I would ever want to take on a project like that myself ever again, though…

We'd like to thank Bob for sharing his memories with us.

GAME BOY COLOR

■ Actually a conversion of the NES version, developer Digital Eclipse did an admirable job squeezing *1942* onto the Game Boy Color. Despite an inevitably cramped screen, the game plays very smoothly, and the only major drawback is an unfortunate super-irritating recreation of the original's 'whistling' marching band soundtrack.

COMMODORE 64

■ The C64 conversion is a strange beast; the graphics are excellent and the game plays a lovely rendition of the theme to *633 Squadron* (courtesy of Mark Cooksey), but it's hard to recommend due to its difficulty. The squashed screen and faster enemy bullets are bad enough; cheap deaths from airplanes arriving rapidly behind the player are inexcusable. Frustrating.



iOS

■ Available as part of the *Capcom Arcade* app, and, as you might expect, this is an accurate port. However it suffers from the on-screen controls as, despite the Super Ace set to auto fire, the player's finger frequently obscures enemy planes, making it a frustrating experience.

hits. Following the success of *Commando* and *Ghosts 'N' Goblins*, *1942* was licensed by Elite Systems for release on the Amstrad CPC, Commodore 64 and ZX Spectrum, and its use of different developers was obvious as each offered a different and unique experience. Capcom themselves handled some conversions which included a rather credible MSX effort, while ASCII Corporation developed the game for the Japanese home computer market (including ports for the FM-7, NEC PC-88 and Sharp X1). Typifying *1942*'s longevity, most of the conversions at the time were released in either 1986 or 1987, sometime after the original had debuted in arcades.

But let's speculate once more on that pitch meeting from 1984. Maybe the atmosphere wasn't tense; maybe it was one of excitement. Maybe the assembled executives could see the potential of the game, and more critically, the increased role that the American and European markets would have to play. Whatever the mood, the decision was vindicated. As one of the key titles in establishing Capcom as a gaming giant, *1942*'s role can never be underestimated and its legacy lives on. ✱

HOW THE PlayS



tation CHANGED GAMING

It was the console that arguably killed the arcades, but revolutionised the way we played at home. David Crookes looks at why, 20 years after its western launch, we shouldn't underestimate the power of PlayStation

In 2000, some six years after the PlayStation had launched in Japan and with the PS2 finding its way into the sweaty hands of smitten gamers, Phil Harrison, then senior vice president for Sony Computer Entertainment Europe, spoke retrospectively of the ambition of the console brand that shook the dominance of Nintendo and Sega to its foundations.

At this point in time, Sega was months off throwing in the towel as its acclaimed yet largely shunned Dreamcast flopped in the shadow of its Sony rival. The Nintendo 64 was about to be set aside in favour of the GameCube. Atari had long been cast into the wilderness as its final console, the Jaguar, was discontinued in 1994 and its name was on the verge of being sold by Hasbro Interactive to Infogrames.

But Harrison had a different company in mind when he reflected on the manner in which the PlayStation had cleaned up the opposition and made the fifth generation entirely its own. "We wanted it to become the Hoover of videogames," he said, of the aim to make the console late-comer a proprietary eponym. "And, in many ways, it has."

It is fair to say that no gaming machine up until that point had ever had the widespread, mass-market impact of the attractive, CD-playing grey plastic box of tricks that became the PlayStation, as controversial as that may sound. Countless amazing consoles had come before it, but none of them were able to truly break into the mainstream and



» [PlayStation] 20 years ago we would have never predicted how important this logo would become.



» Although it catered for two players out of the box, it was possible to add more pads with a Multitap.

none were able to say that, nine years and six months after launch, they had sold 100 million units.

"I think really, the legacy of the original PlayStation is that it took gaming from a pastime that was for young people or maybe for slightly geeky people and it turned it into a highly credible form of mass entertainment, really comparable with great legitimacy with the music business and the movie business," says Sony's current European boss Jim Ryan.

Yet how did a console made by an outsider make such an impact? How did it become so successful that the stars of its games would adorn the covers of fashionable magazines? And why do people talk of the period between 1990 and 2000 as the era of the PlayStation Generation when the console wasn't even around for a good third of that time?



The answer is about to unfold. "I think Sony did a fantastic job in presenting PlayStation as a brand new way of playing and making games," explains Nick Burcombe, the lead designer of seminal title *WipEout*. "Sony's message about how powerful the PlayStation would be prior to launch did enough to get gamers looking at them, even though Sega's Dreamcast also had 3D capabilities and used discs too. Dreamcast was a good console but the message was loud and clear: PlayStation was even better. The message worked well."

The story of the PlayStation's origin has been well told. It's an intriguing tale of two companies; Sony and Nintendo striking a deal in 1988 to create a CD-ROM add-on to the SNES that would use Nintendo "Super Discs". Sony went further and added support for Video CDs and it took advantage of its permission to create its own standalone console which it called the Play Station (note the space), a machine that allowed for the playing of both CDs and cartridge. Sony showed off its creation to great fanfare at that year's Consumer Electronics Show in Las Vegas in 1991.

But within mere hours of the unveiling Nintendo got cold feet. It believed Sony could potentially pull the rug from under them and steal a portion of the industry so it cancelled the deal, announcing the day after that it was instead bringing rival Philips on board. Eager not to waste the huge amount of time invested in the project, Sony's president Norio Ohga ordered that development would continue without the experience of Nintendo. Ken Kutaragi who had begun his career in Sony's digital research labs was given the task of designing the machine, which Sony codenamed PSX.

Kutaragi pooled the resources of engineers who had been working on a geometric computer graphics engine called System-G that was capable of real time 3D texture mapping for broadcasting networks. By 1992 he had a prototype ready to show his bosses, but it wasn't an easy ride for Kutaragi and his team. There was much internal resistance to the idea, with

MARTYN BROWN

VIDEOGAME DEVELOPER AND CONSULTANT

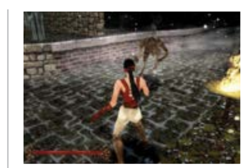
"Back then it was all about 3D and especially the T-Rex demo that was doing the rounds – but we had our greatest PlayStation hit with a 2D game: *Worms*."



PAUL RANSON

FORMERLY OF BIG RED

"Levels, cutscenes and music previously squished into carts could now be developed with panache and in a style that we thought emulated the movie business. PS1 for me was the proper start of the Hollywood style entertainment in the videogame business."



» [PlayStation] *Nightmare Creatures* tapped into the survival horror genre.



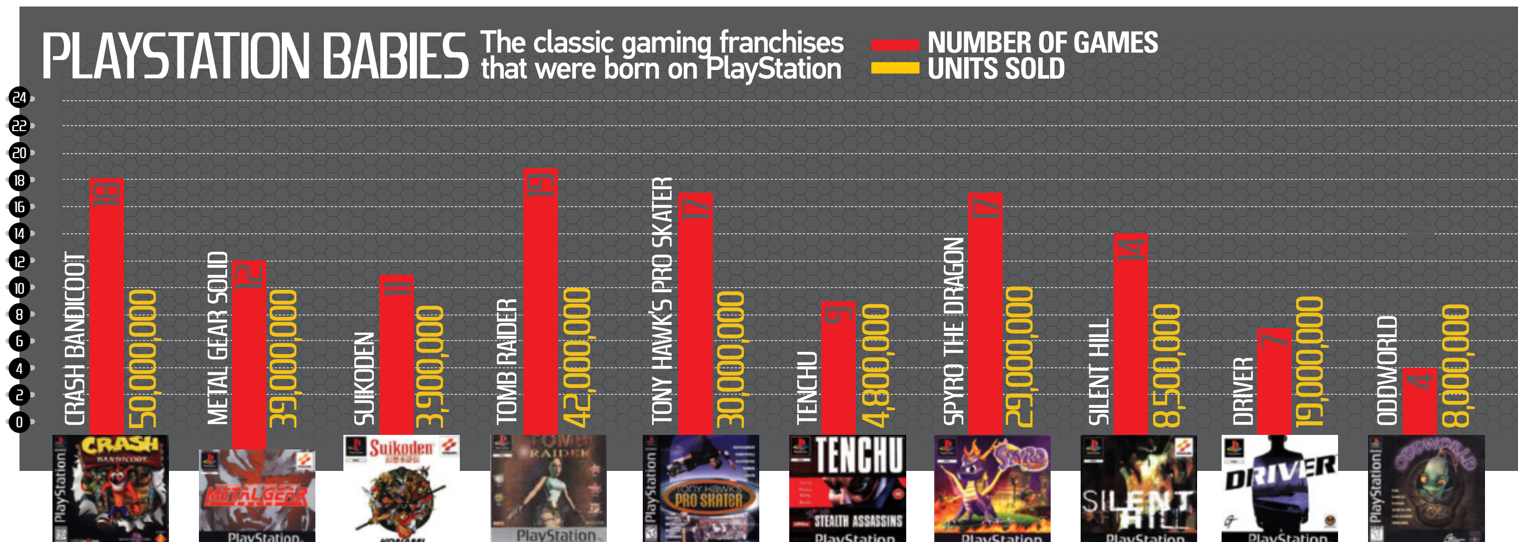
» [PlayStation] Cliff Bleszinski's favourite game is *Jumping Flash*.



» [PlayStation] *Pandemonium* was an early platformer in 2.5D.

PLAYSTATION BABIES

The classic gaming franchises that were born on PlayStation



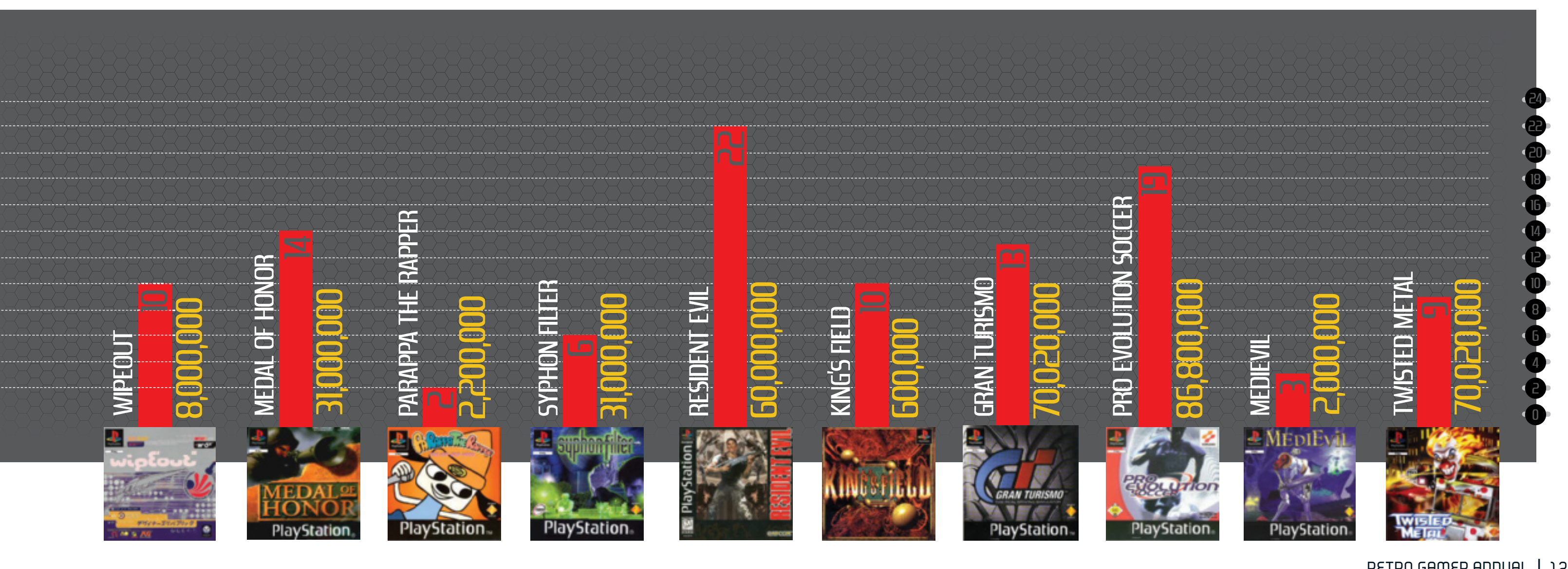
» The PlayStation's CD-ROM-based media ensured far higher capacity than cartridge-based consoles.

DARREN FALCUS
MANAGING DIRECTOR OF HIPPO ENTERTAINMENT
"The 3D technology and internal structure meant that it was a much easier technology to develop for."

» That's right, even the power button managed to look sexy on Sony's new console.

» Games required a memory card for saving, something that meant an additional cost for gamers.

» PlayStation's additional ports let Sony add various peripherals to the console.



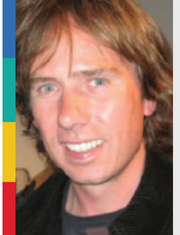
Sony still, overall, reluctant to become a player in the games industry. Yet Ohga's anger at Nintendo was all that was needed to overrule any doubts.

For Sony's president, it was a case of winning at all costs. He kept the project on track, agreed the purchase of British development house Psygnosis (a startling move, given Japan's previous tendency to invest internally) and, with some refinement and a bit of design prodding, the machine was geared up for launch, first in Japan on 3 December 1994 and then in September 1995 in North America and Europe (selling for £299 in the UK). The console turned heads. "Two words: dinosaur demo," remembers Brian Baglow, writer of the first *Grand Theft Auto*, of the 3D graphic display Sony had slapped on a disc for those who had pre-ordered the console. "As soon as I saw the giant walking T-Rex, I was astonished and awed."

But the dino demo wasn't the only thing that stood out. The PlayStation, which would – thanks to a small redesign and relaunch in 2000 eventually become known as the PSone – had a shapely, comfortable games controller which did away with the flat design of other machines and replaced letters with shapes. It had external memory cards with 15 save blocks that added up to 128k (an idea copied from the Neo-Geo). It also had a slick appearance. More than all of that, though, it had games. Stunning games. And people wanted to play them.

Eight games were available for the PlayStation on the first day but one truly stood out: Namco's *Ridge Racer*. It was an arcade driving sim with chunky 3D cars, wide tracks, catchy tunes and equally memorable speech; it was a title that laid down an ambitious marker and showed games could have just as much impact as music or film.

It was also a near-perfect version of the hit that had been attracting coins at the arcades and it helped



DAVID DARLING

KWALEE CEO & FORMER CODEMASTERS BOSS

"It was the first proper 3D games console to gain significant market share and [Sony was] very active in supporting and encouraging developers. It was fun making games with 3D models and polygons rather than the 2D games we'd made for years on machines like the Sega Mega Drive."



» [PlayStation] There was no doubting the significant role that the tomb-raiding Lara Croft played in pushing *Tomb Raider* high in the charts.

UNDER THE HOOD

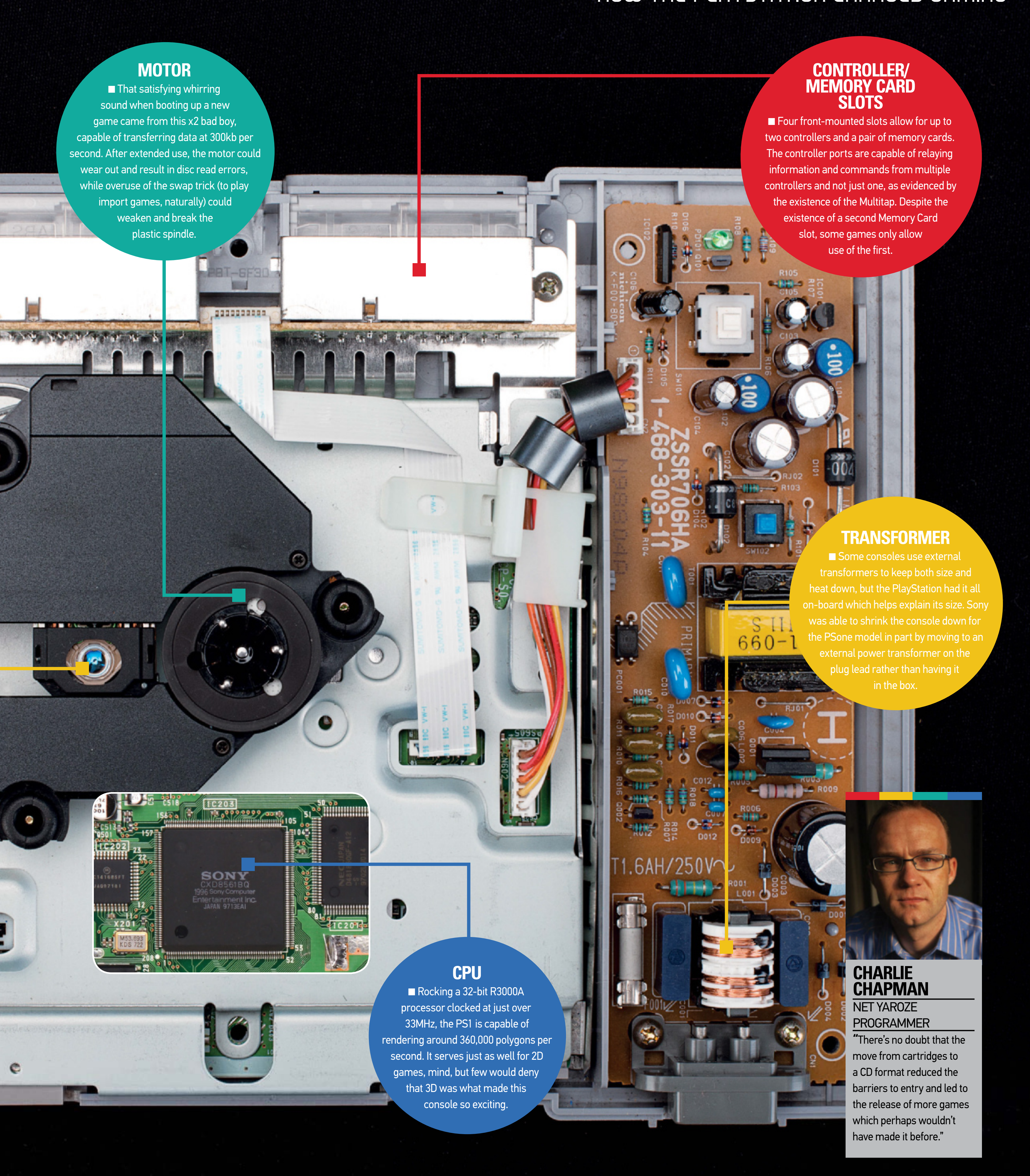
The components that made the magic happen

RAM

■ The PlayStation packs a whopping 2MB of RAM, which might be next to nothing by today's standards but it proved to be more than enough. An additional 4k data cache meant that lesser commands could be handled elsewhere, freeing up a little more memory, while 1MB of graphics RAM also exists for visuals.

LASER

■ Consoles are never built using top-end tech and the PlayStation was no exception. While certainly fit for purpose, the disc-reading laser used in its CD drive was the cause or some of the most common hardware failures. It could be replaced, but enterprising gamers often instead resorted to the cheaper option of balancing the console at all kinds of precarious angles to make it read discs.



MOTOR

■ That satisfying whirring sound when booting up a new game came from this x2 bad boy, capable of transferring data at 300kb per second. After extended use, the motor could wear out and result in disc read errors, while overuse of the swap trick (to play import games, naturally) could weaken and break the plastic spindle.

CONTROLLER/ MEMORY CARD SLOTS

■ Four front-mounted slots allow for up to two controllers and a pair of memory cards. The controller ports are capable of relaying information and commands from multiple controllers and not just one, as evidenced by the existence of the Multitap. Despite the existence of a second Memory Card slot, some games only allow use of the first.

TRANSFORMER

■ Some consoles use external transformers to keep both size and heat down, but the PlayStation had it all on-board which helps explain its size. Sony was able to shrink the console down for the PSone model in part by moving to an external power transformer on the plug lead rather than having it in the box.

CPU

■ Rocking a 32-bit R3000A processor clocked at just over 33MHz, the PS1 is capable of rendering around 360,000 polygons per second. It serves just as well for 2D games, mind, but few would deny that 3D was what made this console so exciting.

CHARLIE CHAPMAN

NET YAROZE PROGRAMMER

"There's no doubt that the move from cartridges to a CD format reduced the barriers to entry and led to the release of more games which perhaps wouldn't have made it before."

HOW SONY MADE GAMING COOL

The reasons PlayStation was such an important console

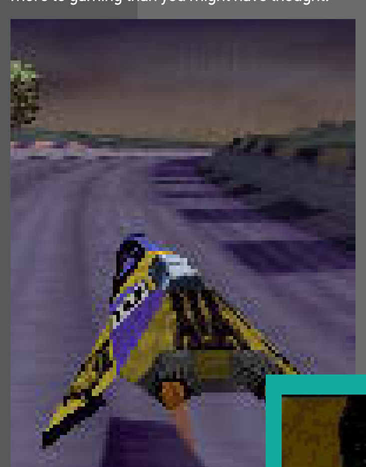


ADVERTS

■ It used to be that advertising agencies would target the same demographic as toy retailers when producing campaigns for games. But by making interesting and original shorts that broke free from that, Sony's marketing proved to generate both conversation and interest in the brand.

NIGHTCLUBS

■ Placing consoles running stylish and exciting games like *WipEout* in bars and nightclubs taught an entire generation one very important lesson – games aren't for kids any more, and there's a lot more to gaming than you might have thought.





GAMES OF SUBSTANCE

■ With so much more storage space, it wasn't just visuals that could be more impressive – worlds and mechanics could be far more intricate than ever before. Only a handful of 16-bit games lasted upwards of 20 hours, but PS1 RPGs would commonly come in closer to 100 hours.

PIRACY

■ What better way to hit the mainstream than to have games available for free? With the web in its infancy, blank discs constantly falling in price and several simple solutions for running unsigned code on PlayStation, piracy was undeniably a huge part of the PlayStation boom.



MATURE GAMES

■ The better graphics got, the more developers were able to use games to tell grown-up stories and faithfully cover topics that simpler visuals perhaps wouldn't do justice. Between visuals, audio and scale, we finally entered an era where games could move and affect players on a similar level to movies. This more emotional connection to games meant that they could be taken a lot more seriously as an entertainment medium.





CD FORMAT

■ It used to be that taking a few games around to a friend's house would involve lugging around a bag full of chunky cartridges. With the rise of disc-based media, one game case could hold a collection, plus the format also allowed for better audio quality than older hardware could manage.

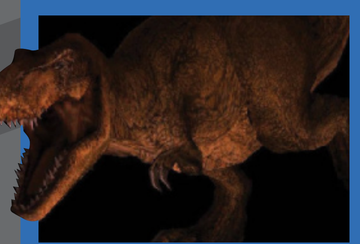
NINTENDO/SEGA

■ A lot of Sony's success came down to a fresh approach to gaming – its competitors had been butting heads for years, leading them to contest the same market. But this just allowed Sony's new audience to appreciate something new even more.

NET YAROZE

■ The Net Yaroze provided students and hobbyist programmers with a chance to make PlayStation games, opening up the traditionally closed console development scene. A small community of bedroom coders sprang up as a result.





3D GAMING

■ Clever coding allowed 3D (or 3D-style) visuals on some of the oldest hardware, but it was the scale on which the PS1 hardware was capable of rendering 3D worlds and environments that really blew us all away. Early polygon visuals haven't aged well, but it was so impressive at the time.



» [Playstation] With the tunes from *Parappa The Rapper* staying with players forever, little wonder it helped kickstart the whole rhythm-based genre.

» [PlayStation] With a gorgeous opening that showed the power of the PlayStation and great moves, *Tekken II* was a revelation.

» [PlayStation] Although it was an below-average release, *Porsche Challenge* didn't half look good.

Sony shift 100,000 PlayStations on the first day in Japan. Before long, impatient punters were splashing out £700 or more to import the console into Europe and the US and the momentum began to build. Those 3D capabilities were a major draw and suddenly gaming began to look more mature, moving away from the perception of kids playing in their darkened bedrooms to something trendy adults wanted to share while sitting on their sofa.

"The PlayStation introduced the idea of true 3D gaming to the living room and, beyond that, the mass market," says Cliff Bleszinski, whose first game *The Palace Of Deceit: Dragon's Plight* was released in 1991. "The PlayStation shifted the console from having an almost toy-like quality into the consumer electronics that are just as desired by 12-year-olds as they are by 35-year-olds."Key to this was getting developers on board and helping them through the transition from 2D to 3D. Before the PlayStation, creating 3D on consoles was no easy task but the PC had shown the possibilities with *Doom*, *Wolfenstein* and *Descent*.

The SNES, for instance, had a Mode 7 playfield which allowed for some pseudo-3D with games such as *Mario Kart* and *Pilotwings* but it could only simulate a single flat-textured plane. "There were a handful of games using the SuperFX chip for SNES, which was a coprocessor that accelerated 3D rendering on the SNES, but it wasn't a fully featured GPU as found in the PS1, and it was quite limited," explains Michael Troughton, who worked on the *Destruction Derby* games for the PlayStation while at Reflections.

"The consoles that were appearing weren't making life any easier. Sega Saturn was a powerful machine with 2 SH2 RISC CPUs and a number of dedicated coprocessors to handle audio, video, sprites and polygons but it was notoriously difficult to program for," says Michael. "Programmers had little experience with multi-processsing and it hindered them. The PlayStation suddenly opened 3D up to a much wider range of developers, with its custom graphics processor and geometry engine in hardware.

"In fact, I remember thinking it was amazing that the PS1 had the same CPU as the £5,000 Silicon graphics workstation we were using to build the 3D environments. Now almost any programmer with a minimal amount of basic maths knowledge could write a 3D game."

MARTIN HOLLIS
WORKED ON GOLDENEYE:007
"Sony cultivated the machine's association with music and club culture. Without this it is difficult to imagine *Dance Dance Revolution*, *SingStar*, *Guitar Hero*, or *Rock Band*."

Fuelled by Namco's racer, sped along by *WipEout* and propelled to a higher platform by *Jumping Flash* (which Cliff Bleszinski says remains his favourite game), 3D became the PlayStation's hallmark and it led to an insatiable demand for three-dimensional titles. Most releases for the console were 3D (the occasional *Oddworld* game aside) and the likes of *Tekken* and *Battle Arena Toshinden* continued to feed the appetite.

This changed videogaming in another way. Given that 3D was more complex, larger development teams were needed. Programmers and artists who struggled to work with 3D found themselves floundering as the new way of presenting games became expected on all platforms, and not just the PS1. "The switch to 3D was a ton of work and it required the relearning of new skills," laments one half of the Pickford Bros development team, Ste Pickford, who designed a kids cartoon game called *DragonTales: Dragon Seek*. "The massive 512 MB CDs we had to fill meant tons more graphics. It was more a feeling of 'Aaargh!' than being blown away."

Sony initially refused to grant concept approval of any 2D game, in its bid to use the beauty of graphics to attract a new breed of gamer. "It meant all game developers had to make 3D games when we were all new to it. I think this sent games backwards for a while because the PlayStation had power to burn for 2D stuff and there could have been some amazing 2D games as we all had the skills and tools to make them," continues Ste.

But as time went on, developers picked up the skills. "I've definitely experienced the hard work that comes with adapting game development to each new generation of consoles," says Michiteru Okabe who produced the art and graphics for *Armoured Core: Master Of Arena* in 1999 and has, more recently, been the producer on *Resident Evil Revelations 2*. He recalls trying to reuse textures to make a massive stage, running out of memory and redesigning it all at the last minute.

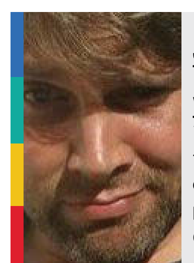
Indeed, Paul Hughes, who was working for EA when the PlayStation was launched, tells of Sony's excellent tools, documentation and all important development kit. Sony also revolutionised the technical requirements checklist and this helped to ensure a solid barrier to entry from a quality perspective.

"I found the initial transition pretty painless," he says. "I'd been writing 3D engines since the late Eighties, so I had a reasonable grasp of rendering pipelines – if anything, it was mind-numbing that it had hardware that would draw textured and lit triangles for me rather than having to obsess about every clock cycle of a software triangle rasteriser. From a visual effects perspective, it had proper, honest-to-goodness alpha blending which really helped up the ante for particle/trail/post effects."

Despite the advancements, however, the mainstream press cast doubt on the companies that were newly emerging to take a slice of the digital pie. In May 1995, the *New York Times* ran with the headline "Video Game War Looms In Hardware" and it spoke of the challenge to be dominant in the $4 billion videogame market by "introducing better, faster machines with 32-bit microprocessors that can deliver three-dimensional graphics and quicker and more intricate action than the current 16-bit machines."

Sony, the 3DO Company, and Sega were scorned for offering what were now seen to be comparatively expensive machines. "Nintendo of America and the Atari Corporation are producing machines that retain the familiar cartridge format and sell for considerably less," the piece continued, neglecting to focus on what was really important…

It was the CD-ROM drive that was so important for Sony (which, after all, had invented the CD format in 1982 in collaboration with Philips) and it was, as we saw, the entire reason the company had got involved into the videogame industry in the first place. "Sony was our key partner when we were developing the first CD-ROM games on Genesis," Tom Kalinske, the former CEO of Sega of America tells us, "Back then, none of us knew how to develop on the optical disc media but we all thought it could be great – the future for game machines." It helped to lower the cost of game production, ensuring huge amounts of cash was not tied up in pre-booked cartridge stock that may well not have sold.



JAMES RUTHERFORD
NET YAROZE PROGRAMMER WHO LATER WORKED ON STUNTMAN AND DRIV3R
"Net Yaroze added a whole new dimension to the PlayStation and it was great to be able to create games on something that was current and powerful. Having the games on a magazine cover disc was a major incentive for us."

20 YEARS

STEWART GILRAY

CEO OF JUST ADD WATER

"You'll have to remember that 20 years ago games simply didn't do 3D at home, at least not as well as the arcades did. So when we got our Japanese import PlayStation at launch with *Ridge Racer*, we all sat around with the joypad in our hands, loaded it up, and raced like we were playing the arcade version. *That* blew us away."

» The PlayStation's pad went through numerous revisions in its live, this one introduced analog sticks.

DUALSHOCK AND AWE The evolution of the PlayStation pad

PLAYSTATION CONTROL PAD

■ The original controller and our first taste of those iconic button symbols. Also notable for popularising the use of four shoulder buttons, where most major pads would only use two.



DUAL ANALOG

■ With players wanting more precise control for 3D gaming, the Dual Analog was a prayer quickly answered. First-person games could finally be played with tight movement.

DUALSHOCK

■ Effectively the same as the previous controller, with motors fitted into each handgrip for vibration. It also brought two additional buttons, namely L3 and R3 mapped to clicking the analog sticks.

DUALSHOCK 2

■ While cosmetically and technically very similar to the original DualShock (to the point where originals would work on PS2 as well), there was one major change: every major button was analog rather than digital.



DUAL ANALOG

■ With players wanting more precise control for 3D gaming, the Dual Analog was a prayer quickly answered. First-person games could finally be played with tight movement, while inventive devs could create quirky uses for a pair of sticks, as seen with launch title *Ape Escape*.

» [PlayStation] Some tried to make out that Crash Bandicoot was the PlayStation mascot but, as it turned out, the machine didn't need a Mario or Sonic equivalent.

"The move to disc was a huge but natural and necessary change," says Dave Ranyard, the current London Studio boss of SCEE. "Prior to that, we had cartridges and before that dedicated machines, but the ability to store tons more data for our games improved them no end, graphically, musically, and in terms of scope. Disc is a very cheap and efficient method of distributing lots of data."

The disc also allowed for the streaming of a lot of data. Movies could play back in 16-bit colour thanks to the dedicated MDEC hardware. "Then of course you had CD quality audio that you could stream off the media rather than a MIDI track with less than stellar instruments," says Paul Hughes. "Everything about it just oozed quality – right from the boot-up sequence."

PlayStation cemented CD soundtracks as the standard throughout the industry. Until that point most gamers were content with the chip-music that consoles offered, excellent as it was. "But after people started hearing tracks they recognised by the Chemical Brothers and Leftfield in their games, chip-music became unacceptable really fast," says Colin Anderson, who headed up the audio team at DMA Design from 1993 to 2000 before leaving to create Denki, the world's first digital toy company.

"It kicked off some sizeable investment in audio development as teams struggled to switch from chip-music to full CD-quality soundtracks," he continues. "I enjoyed a front row seat on that particular roller-coaster as we were working on the audio design for the game that would eventually become *Grand Theft Auto*. When we started development we fully expected to be using chip-music, but within six months it became clear we needed to up our game if we wanted to compete with all the other great games that were being released. *WipEout* was the straw that finally helped me convince [boss] Dave Jones that DMA needed its own music studio."

The PlayStation tapped into modern-day culture like no other games console had ever achieved before, positioning itself in style mags and persuading celebrities to grab a joypad in the wake of videogames' new cool status. ("I was getting carried away playing *Tekken II* and *Tomb Raider* for hours on end," excused England goalkeeper David James when he conceded three times against Newcastle in 1997.)

But music and the PlayStation, in particular, went hand-in-hand. Developers started to experiment with audio, putting it at the heart of titles such as *Vib-Ribbon* and *PaRappa The Rapper* which led to rhythm-based game crazes such as *Dance Dance Revolution*. They also tapped into the Nineties music vibe of techno and house. The PlayStation ingratiated itself with the growing underground club culture and the sound of big names such as Orbital, Leftfield and The Future Sound Of London.

In Liverpool, where *WipEout* was made, the emerging super-club Cream was positively surreal. Bass pounded, strobes flashed, people danced and then, they stopped, they stared, they gravitated towards the PlayStation pods that had been placed there, just as they had in dozens of other clubs up and down the country, and they played. "We knew something significant about gaming had changed," continues Nick Burcombe, who now heads up Playrise Digital. "It was pretty amazing really."

In London, New York, Tokyo and hundreds of cities in between, clubbers were relaxing between DJ sets with a few rounds of *Virtua Fighter* or *WipEout*, which was the first game to incorporate licensed music. "PlayStation was bringing gaming out of the bedroom and into the mainstream in a way no other company had," says Colin. "That's what changed gaming forever. It wasn't the hardware."

Aggressive infiltration of this kind, together with an approach to marketing that was wildly different to much of what had gone before was repositioning gaming as a cool pursuit. "At the time of its launch I was a student and I'd always been into videogames from the early days of arcades," says Dave. "I

ESSENTIAL EXTRAS

Six of the best Sony peripherals

x5images © Evan-Amos

POCKETSTATION

■ Effectively a portable device akin to the Dreamcast's VMU, PocketStation never saw the light of day outside of Japan. Over 50 games supported this interesting device, which plugged into the console via the memory card port and had its own LCD screen.

MEMORY CARD

■ While cartridges sometimes allowed game data to be saved to internal memory, the CD format offered no such luxury. Sony's solution was a proprietary storage solution – a 15-block 1MB memory card to which game data could be saved.

MULTITAP

■ Two controller ports was enough for most games but to fully enjoy something like *Micro Machines V3* (whose predecessor had additional ports built into the cartridge itself) or Bomberman, you'd need more. Enter the Multitap.

GUNCON



■ Light gun arcade games were all the rage around the time the PS1 rose to power, and this accessory, originally released to allow *Time Crisis* to be played at home, proved to be one of the most accurate home approximations of the arcade experience.

GAMESHARK

■ Plugging into the console's parallel port, these cheat devices allowed game code to be modified to activate cheats, alter elements of a game or even to access content that wasn't in the final build, including additional scenes in *Final Fantasy VII*.



DUALSHOCK 3

■ As costs fell and tech improved, Sony was soon able to reintroduce rumble to the Sixaxis template and the DualShock 3 was born. It quickly superseded its forerunner as the PS3 standard and Sixaxis was discontinued in mid-2008.



DUALSHOCK 4

■ The first full evolution in the life of the DualShock, the PS4 pad adds many new features. Sixaxis motion control remains, with a rear-mounted light bar allowing a camera to better place the handset for accuracy. It also adds a touch pad and Options and Share keys.





» [PlayStation] *WipEout* was one of the UK launch titles for the PlayStation and it took both the gaming and the wider world by storm.



» [PlayStation] As the sequel to *Flashback*, the action-adventure *Fade To Black* only made it to the PlayStation (and PC).

would hang around playing *Space Invaders* and *Galaxians* and until the PS1 came out, that kind of thing made me a geek. But this console changed all that – suddenly videogames were cool – not just acceptable, but actually club culture cool. With a soundtrack from the coolest techno and dance DJs, videogames became a part of sub-culture. And it led to a more mainstream acceptance of consoles in general."

It helped the console to continue to attract adults, a strategy that Sega had already begun but Sony seemed to perfect. One of the keys to this was Steve Race, boss of Sony Computer Entertainment of America. Race had worked under Kalinske at Sega and he had no problem competing with his former workers (indeed, he infamously took to the stage at the inaugural E3 in Los Angeles just after Sega had announced the Sega Saturn at a price point of $399, muttering one word – "$299" – and walking off to great applause).

"Steve knew our strategies of going after an older audience and being edgy and competitive in advertising," continues Tom Kalinske. "He knew we would do everything we could to come across as the superior 'cool' brand, and he did this very well. But I don't think Sony did anything other than copy lots of aggressive marketing that we had done at Sega initially with Genesis." And yet, Sony took its marketing to a different level.

Although ads did target children (*Croc* was plastered on bus shelters near schools) titles like *Resident Evil* were certainly aimed at an older audience and developers did all they could to grab their attention. The disgraced former publicist Max Clifford used the tabloid press to whip up a publicity frenzy for controversial titles. Games such as *Grand Theft Auto* and *Cool Boarders 2* made the papers by talking of "having to get higher than last time" in ads (Darren Carter, the then senior product manager at SCEE, defended this move, saying, "the wording is genuinely how snowboarders talk").

One of the most memorable adverts, though, was *Double Life* which had been created by ad agency TBWA. Written by James Sinclair, it became a classic, its lengthy monologue showcasing eccentric individuals describing what they did in their free time. "I won't deny I've engaged in violence, even indulged in it," says one, to the tune of Fauré's *Requiem* as he describes – the viewer discovers later – his fantasy PlayStation life. In 2007, the advert, directed by Frank Budgen, was accepted into the Clio Hall of Fame.

Sony's brief was to the point. It wanted to "break out of a core consumer base of geeky pubescent teenage boys by bringing a broader acceptability and dignity that was absent from the sector." Sinclair cross-cast the advert, showing policemen breaking the law and vicars committing all sorts of sins ("this got softened somewhat – inevitably," he tells us). The idea was to put people at the centre of gaming. The advert contained no gameplay footage or screenshots.

"People's imagination is the most powerful element of the gaming experience, more than the graphics, sound effects, atmosphere and so on. That's what really puts them in the moment," James says of the ad that was shot for television and cinema. "I'd thrown in some off-the-beaten-track words and phrases like 'hoi polloi' to give the piece a sort of anachronistic vibe. It gave it a timelessness that has served it well over the years."



STEVE LYCETT SUMO DIGITAL

"To understand the impact, you've got to remember that when we first got our hands on the PlayStation hardware it was a revelation on a number of fronts. First, it was the first proper dedicated 3D console – this is in a pre-3DFX/PowerVR accelerated PC graphics era, too. So the results you could achieve quickly and easily were way in front of anything else. Next, having spent so long working with limited cartridge budgets, having a whole CD you could fill and plenty of memory (2MB was a lot back then!) opened the door to bigger levels, better audio, cutscenes and really going to town on the presentation as much as the game. You could say any one of those components existed individually, but it was the PlayStation that pulled it all together in one powerful and complete package."

And yet, away from the camera, Sony was putting games centre stage, signing exclusive deals for the best games, among them *Tomb Raider*. The second and third titles in the series made the PlayStation their console home and it led to increased sales. "I remember getting our hands on the original *Tomb Raider* when we were working on the original *GTA* and thinking, 'Oh f***'," says Brian, on the impact the game had.

But it wasn't hard to persuade companies to climb aboard. "Behind the scenes, Sony offered developers a better deal than its competitors," says David Banner who worked on *Tomb Raider* as a tester. "It gave better royalties and it promoted games well. It understood that having the best console relies on having content so the more developers it got on board the more titles it'd have for the customer to digest. Nintendo and Sega primarily relied on their titles being developed in-house, whereas Sony saw the potential of opening up development to third party developers."

Those third-party developers seized this opportunity, understanding what a console with such a large user base could offer. Programmers and artists looked for new ways to take advantage of 3D and they also sought to tap into current trends such as extreme sports, generating games like *Tony Hawk's Pro Skater* and leading to many a big budget PlayStation event. Over the course of the PlayStation's lifetime, the age of developers also began to rise, with graduates seeing a stable career path in the industry. "Two of the guys on the *Destruction Derby* team were still in their teens – that would be unheard of today," says Michael.

That said, Sony also came to embrace smaller, independent developers by releasing a development kit called the Net Yaroze. The problem with previous consoles was the cost of developing for the systems. They were, by and large, closed shops. But with Net Yaroze, a small outlay was enough to bag a kit and start making games, some of which ended up on the cover disc of the *Official PlayStation Magazine* which, thanks to the number of demos it would give away, began to reach a sales figure of over 450,000.

"We used the Net Yaroze to teach console programming at the University of Abertay in Dundee



» [PlayStation] *Ridge Racer Revolution* was the chunky car sequel to *Ridge Racer* but the gameplay remained entirely unchanged.

THE 20 MOST IMPORTANT MOMENTS IN PLAYSTATION HISTORY



SONY GOES IT ALONE

1 After talks with Nintendo to develop a disc-based add-on for the SNES, Nintendo shockingly revealed a partnership with Philips, which ultimately came to nothing. Sony's work was not in vain, however – the groundwork for PlayStation had already been done.

ARCADE-PERFECT PORTS

2 Flick through old magazines and you'll find the term 'arcade perfect' applied in so many inaccurate ways. With *Ridge Racer* and the many coin-op ports that followed, though, it really *was* true a lot of the time.

CD CAPACITY = BIGGER GAMES

3 Cartridges could only allow a certain amount of data to be stored, with no easy way of swapping between them. The compact disc medium changed this, allowing for console games that spanned as many as five discs.



PLATINUM PRICING

4 With gaming growing more popular, Sony made the smart move of adding its most successful games into the Platinum range, slashing prices to help them shift more copies.

ANYONE CAN MAKE GAMES

5 The Net Yaroze remains one of the coolest hardware iterations ever, a developer console that effectively anyone was able to create games for. The best of these would be showcased via the official mag's demo discs.

FINAL FANTASY JUMPS SHIP

6 The only way for something as epic as Square's RPG series to evolve was to go 3D and to go bigger, a combination not possible on carts. With Nintendo still backing the old format, Square had little choice, and it was a huge coup for Sony.

MARKET AWARENESS

7 Smart advertising made PlayStation the coolest brand in gaming in the space of a few relatively simple campaigns – Sony managed to build the idea of gaming being something more than just a nerdy pastime in mere months.

JUST DANCE

8 Cheap plastic dance mats are nothing compared to the glorious coin-op stages (assuming they work properly) upon which the best perform, but bedroom pop stars didn't care. It just felt good to step on arrows.

SWAP TRICK

9 Who *didn't* know the method of getting import games and even illegal copies running on a PS1? Broken spindles and motors were common, but you could play whatever you wanted.

SMALLER, YET SMARTER

10 A revised PlayStation known as the PSone launched in 2000, with its little form and more cost-effective use of components allowing Sony to sell it for less than the original console. It also did away with many popular piracy methods.

GTA3 INVENTS A GENRE

11 DMA's silly crime sprees were fun, but *GTA* only really shot to notoriety when contained realistic and free open-world sociopathy.





DON'T HATE THE PLAYER, HATE THE GAME BOY

12 Sony's plan for Vita was simple – take on Nintendo's handheld dominance by offering console-quality games on the go. Despite huge *Monster Hunter*-fuelled success in Japan, neither PSP nor Vita really managed to break the western market, but Sony still hasn't given up trying just yet.

DVD READY

13 Choosing DVD as a primary format for games was risky, but it also placed the PS2 among the most affordable DVD players available during the format's boom. Want a DVD player? Might as well get one that plays games too…

LEAP YEAR BLUES

14 Original PS3 models were hit by a bizarre bug on 1 March 2010 when an error on the console's internal calendar assumed incorrectly that 2010 was a leap year and proceeded to implode on itself.

LIGHTS, CAMERA…

15 The rise of EyeToy led many (including the other modern major platform holders, apparently) into believing motion control was the future. At least everyone got that wrong, but it was fun while it lasted.

$599

16 The announcement that the PS3 would be worth getting a second job to pay for didn't do all that much to help its early performance – Sony had to do a lot of work to get it even close to the 360 in terms of units sold.

PSN HACKED

17 In April 2011, Sony's PSN network was hacked and the details of around 77 million users compromised in the process. The downtime lasted for several weeks and while something of a disaster, it clearly taught Sony some valuable lessons as it hasn't fallen foul to a similarly devastating attack since.

PS PLUS

18 With Microsoft hiding online play behind a paywall, Sony played it smart – keep online play free (at least on PS3) and instead offer free games for recurring subscribers. The model works, and even third-parties are getting involved now.

ANYTHING YOU CAN DO…

19 Sony's confidence in countering every poor decision made by Microsoft was an easy highlight of E3 2013, but the brazen approach to everything – including pricing – easily explains Sony's return to prominence for this new generation of consoles.

LOVING THE INDIES

20 Whatever you think about Sony's triple-A PS4 line-up, its selection of indie and retro titles is superb. From *Resogun* and *Oddworld* to *Grim Fandango* and *Final Fantasy VII* (a PC port, sure, but it's better than nothing, right?), Sony is doing its bit to keep old-school gameplay alive.



LAUNCH GAMES REVISITED

Sony's PlayStation launch games are now two decades old. We were keen to see how they still fare…

KILEAK: THE BLOOD

"This failed to impress gamers 20 years ago, and it's still a shambles today. The lo-fi visuals and clunky controls are rather charming, but the deathly dull gameplay creates a miserable gaming experience" **DARRAN**





NBA JAM: TOURNAMENT EDITION

"Visually, this isn't too much of a jump up from the previous generation, but as far as gameplay goes, this still stands up today as a great game to play with friends, even if I am still terrible at it even all these years later…" **JON**



STREET FIGHTER: THE MOVIE

"This is a great game for all the wrong reasons. The animation is laughably poor, while the difficulty level is all over the place. It's nowhere near as dull to play as *Toshinden*, but it remains a disappointingly average brawler" **DARRAN**

LAUNCH GAMES*

- **A-TRAIN IV EVOLUTION** JAPAN
- **BATTLE ARENA TOSHINDEN** US/UK
- **CRIME CRACKERS** JAPAN
- **ESPN EXTREME GAMES** US
- **GOKUJÕ PARODIUS DA! DELUXE PACK** JAPAN
- **KILEAK: THE BLOOD** US/UK
- **MAHJONG GOKU SKY** JAPAN
- **MAHJONG STATION MAZIN** JAPAN
- **NBA JAM: TOURNAMENT EDITION** US/UK
- **NEKKETSU OYAKO** JAPAN
- **POWER SERVE 3D** US
- **THE RAIDEN PROJECT** US
- **RAPID RELOAD** UK
- **RAYMAN** JAPAN
- **RIDGE RACER** US/UK
- **STREET FIGHTER: THE MOVIE** US/UK
- **TAMA** JAPAN
- **TOTAL ECLIPSE TURBO** US
- **WIPEOUT** UK

*IT'S WORTH NOTING THAT EVEN SONY UK DOESN'T HAVE COMPLETE LISTINGS, BUT RESEARCH SUGGESTS THE ABOVE LIST IS CORRECT

RAPID RELOAD

"It's not quite as good as *Gunstar Heroes*, which it is clearly trying to imitate, but it's still a great blaster that's probably more appreciated now than it was back then" **NICK**



CHARLES CECIL

REVOLUTION SOFTWARE BOSS AND CREATOR OF BROKEN SWORD

"The PlayStation oozed sex appeal. Sony's inspired marketing quickly made videogames hip. And the team at Sony were amazing – a small team of inspirational, creative people who were re-defining the industry: re-writing the rule book. The two *Broken Sword* games were incredibly well received, being voted amongst the top ten best PlayStation games by *Official PlayStation Magazine* readers. PlayStation launched a new epoch."



BATTLE ARENA TOSHINDEN

"I'd probably have been thrilled at the time with this, but while it looks the business it just doesn't play that well. It's easy to see how *Tekken* became more popular…" **NICK**

at a time when educational establishments could not get their hands on the full development kit," says Professor Ian Marshall, whose department at the Uni received a staggering 40 Net Yaroze kits for its computer games technology Masters and Undergraduate students. "It was close enough to the real thing that transferring from Net Yaroze to the full dev kit did not take much re-learning."

As a result, scores of student programmers were able to write tight code to run on a PlayStation and it opened up a vibrant community of home developers across the world. Just as the Spectrum and BBC Micro created many of the leading UK games developers of the Eighties, so the Net Yaroze contributed to the development of the independent and studio developers we have today. Mitsuru Kamiyama created the RPG *Terra Incognita*. He ended up working on the *Final Fantasy* series which, despite having made its debut on the NES, became one of the PlayStation's most popular titles.

Final Fantasy was one of a large number of games that made the PlayStation such an iconic hit. While Nintendo continued to concentrate on Mario and Sega on Sonic, Sony had no real mascot despite desperate attempts by some players and media to intrinsically link Crash Bandicoot to it. Instead heralded a eclectic era of massive franchises that ran and ran, from *Resident Evil*, *Tomb Raider* and *Tekken* to *WipEout*, *Driver* and *Grand Theft Auto*. Racing sim *Gran Turismo* sold more than 10 million copies.

PATRICK BUCKLAND
CEO, STAINLESS GAMES

"I was actually involved with them pre-launch. Sony was determined not to fall into the same trap as the CDi and the 3DO and try to be everything to all men. They were clearly a games console through and through, not a multimedia device. They also took the start that Sega had made with the Mega Drive and made the PlayStation a games console that you didn't feel embarrassed of."

Most astonishing of all, for the PlayStation, was that the hunger for games was high. In May 1998, Chris Deering, then president of Sony Computer Entertainment Europe, said five or more games were being sold per PlayStation – "at least 50 per cent better than it ever got on 16-bit". At that stage the average age for a PlayStation gamer was 22. The PlayStation was keeping the Eighties kids playing while attracting new audiences.

Sony continued to tinker. It advanced on the N64's Rumble Pak with the DualShock pad in 1998 bringing vibration feedback and it introduced a Platinum budget range for older games that had sold more than 150,000 copies, bringing the cost of console gaming down further. They included *TOCA*, *Die Hard Trilogy*, *Fade To Black*, *Formula 1*, *Time Crisis*, *Micro Machines V3* and *V-Rally*. The PlayStation was also keeping pace: games made at the end of the PS1's life were far more visually stunning than those at the start.

"Sony jumped into the games business, disrupted it and succeeded in much the same way that Apple jumped into the portable music business and took over," says Michael Troughton. "The branding was cool, the device was powerful, the technology was good, the business model was better and the timing was right. All of these things made it successful." *



RIDGE RACER

"Riiiiiidge Raaaaaaacer! Yes there's only one track, but what a track! It still controls exceptionally well, while the jaunty music and challenging track design will keep you chasing those top times" **DARRAN**



JUMPING FLASH

"This was probably just as odd a game back then as it is now, but I can imagine that for its time it really stood out from anything else. The soundtrack is definitely worth a mention as well" **JON**

TOP 25 SPORTS GAMES

retro GAMER READERS' CHOICE

START WARMING UP AND GET YOUR GAME FACE ON AS NICK THORPE IS ABOUT TO RUN DOWN RETRO GAMER READERS' TOP 25 SPORTS GAMES

Emlyn Hughes International Soccer

■ **DEVELOPER:** Audiogenic Software
■ **YEAR:** 1988 ■ **FORMATS:** Various

25 It wasn't just a strong licence that sold this football classic – *Emlyn Hughes International Soccer* offered a decent range of options, including three shooting methods and management features. The graphics were never astounding and sound was a little sparse, but the sheer depth of gameplay was hard to match.



Everybody's Golf

■ **DEVELOPER:** Camelot Software Planning
■ **YEAR:** 1997 ■ **FORMATS:** PlayStation

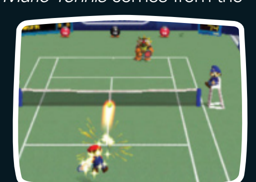
24 There's a secret to the success of the *Everybody's Golf* series: while the cartoonish characters might not make it look like the most serious of golf games to the uninitiated, the game offers some serious depth. Players have a strong degree of control over their shots and the courses are very well designed. Plus, if you get bored of serious golf, there is always the game's mini-golf mode for you to indulge in.

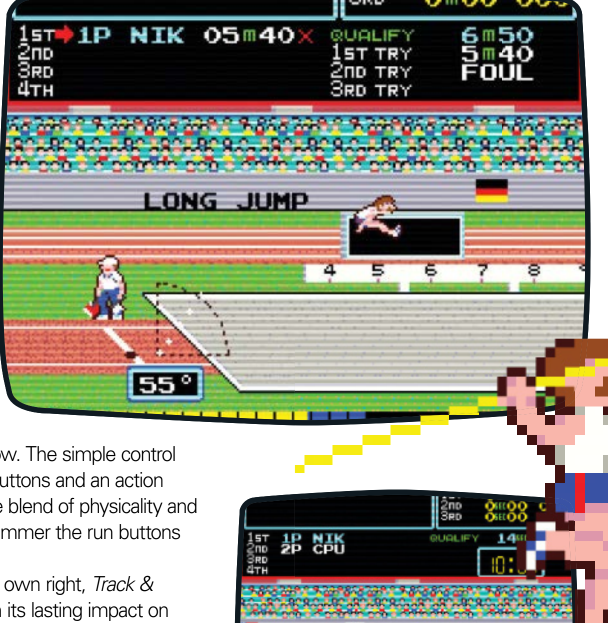


Mario Tennis

■ **DEVELOPER:** Camelot Software Planning
■ **YEAR:** 2000 ■ **FORMATS:** N64

23 The popularity of *Mario Kart* in the world of racing games led Nintendo to believe that a similar formula could work with sports, and it wasn't wrong. The real fun in *Mario Tennis* comes from the addition of power-ups to regular matches, which then quickly spiral out of control when the bananas and green shells start flying like crazy!





Track & Field

■ **DEVELOPER:** Konami
■ **YEAR:** 1983 ■ **FORMATS:** Arcade, Various

22 Konami's arcade classic offers six sports taken straight from the Olympic track and field events such as 100 metre sprint, 110 metre hurdles, long jump, high jump, javelin throw and hammer throw. The simple control scheme omits a joystick, offering just two run buttons and an action button, and manages to approximate the unique blend of physicality and skill required by sport – usually by having you hammer the run buttons and time your press of the action button.

Beyond simply being an enjoyable game in its own right, *Track & Field*'s place in your Top 25 is assured based on its lasting impact on the sports genre. While many *Track & Field* cabinets were damaged by over-zealous players and some rather dubious cheating tactics, few developers of multi-sports games in the decades that have followed have deviated from the game's basic template of rapidly hitting buttons to do things – a ringing endorsement of a classic control scheme.

"THE ORIGINAL AND THE BEST, I WISH EA WERE STILL THIS GOOD" *crusto*



Windjammers

■ **DEVELOPER:** Data East
■ **YEAR:** 1994 ■ **FORMATS:** Arcade, Neo Geo

21 *Windjammers* is a unique game in which two players throw a flying disc at each other, which doesn't actually resemble any existing disc-based sports. The aim of the game is to slam the disc into a goal behind the opponent worth either three or five points, or else score two by landing the disc short of goal in your opponent's side of the court. In practice, it most resembles *Pong* or air hockey.

This has all the hallmarks of a great Nineties arcade game, with colourful visuals, fast-paced action and absurd special moves. However, it's the multiplayer aspect of the game that earns the game its spot in this top 25 – two players of a similar skill level will always have a fierce match, but there's depth for players to develop their skills and outshine their opponents.

EA Hockey

■ **DEVELOPER:** Park Place Productions
■ **YEAR:** 1991 ■ **FORMATS:** Mega Drive

20 Known as *NHL Hockey* in North America, this game was a landmark release as it was the first game to incorporate the now-famous EA Sports branding. The key goal for the game was to create a realistic depiction of ice hockey, both in terms of gameplay and presentation. Neat graphical touches lent the game an appearance that resembled a televised game, such as the branded score display, cut-away animations for players making their way to the penalty box and picture-in-picture close-ups during face-offs.

Similar attention to detail was paid to the game design. Passing is accurate and shots can fly off at a frightening pace, though you'll have to do some work to get them past the keeper. Similarly speedy were the players, who could deliver some punishing body checks, which were only enhanced by the resulting grunts and fist fights. Real rules were included, but for an arcade-style experience you could penalties off and play non-stop. While sequels would develop the formula, the original retains popularity thanks to its inclusion on the EA Sports *Double Header* cartridge bundled with Mega Drive hardware.

SSX 3

■ **DEVELOPER:** EA Canada ■ **YEAR:** 2003
■ **FORMAT:** PS2, Xbox, Gamecube

19 Absurd tricks, outrageous personalities and off-piste shortcuts are the order of the day in this snowboarding classic. Replacing the menu screens with journeys down open mountain peaks really set this sequel apart from its predecessors.

NHLPA Hockey 93

■ **DEVELOPER:** Park Place Productions
■ **YEAR:** 1992 ■ **FORMAT:** Mega Drive, SNES

18 The addition of a league feature and real hockey stars ensured the superiority of *NHLPA Hockey 93* over its predecessor, while the ability to get into spontaneous fights saw it receive the nod over the more realistic and restrained *NHL 94*.

NBA Jam Tournament Edition

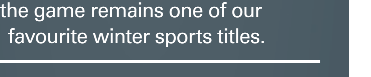
■ **DEVELOPER:** Midway ■ **YEAR:** 1995
■ **FORMAT:** Arcade, Various

17 For serious players, this update offered more players, injuries and additional player statistics. For everyone else, there was a whole host of outrageous secret characters such as Bill Clinton not to mention there was now awesome new dunks to gawp at.

Winter Games

■ **DEVELOPER:** Epyx ■ **YEAR:** 1985
■ **FORMAT:** Various

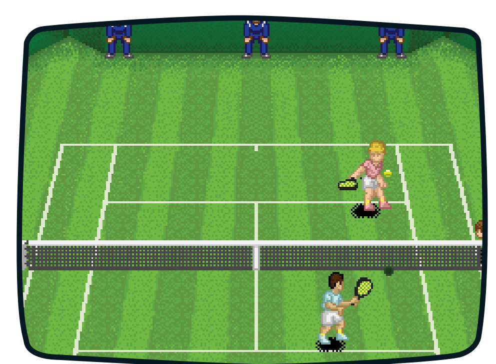
16 This title captures the many thrills of sliding around on snow and ice, including events such as the biathlon, figure skating, ski jumping and bobsled. With great visuals and excellent controls the game remains one of our favourite winter sports titles.

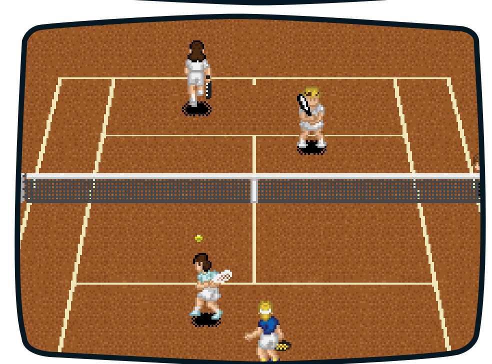


FIFA: Road To World Cup 98

■ **DEVELOPER:** EA Canada ■ **YEAR:** 1997
■ **FORMAT:** Various

15 After a couple of false starts, EA finally managed to get the *FIFA* series working well in 3D with this fast-paced game. If qualifying for the World Cup got too tough, you could always punch the keeper – a favourite feature amongst casual fans.





Hyper Sports

■ **DEVELOPER:** Konami
■ **YEAR:** 1984 ■ **FORMATS:** Arcade, Various

14 Konami's follow-up to *Track & Field* featured seven brand new events for players to tackle: swimming, skeet shooting, long horse, archery, triple jump, weight lifting and pole vault. The excellent control scheme of the original game was retained, allowing players to get straight down to action, and though the events weren't quite as strong the game was popular regardless.

It's not the arcade game alone that has propelled the game so high. Many readers mentioned their love for the excellent home conversions of *Hyper Sports* on the C64 and Spectrum, which each scored 90%+ scores in *Zzap!64* and *Crash* respectively and both offer an experience close to that of the arcade game. It's rare that a conversion is as revered as the original, but these versions of H*yper Sports* have achieved that status.

Super Tennis

■ **DEVELOPER:** Tokyo Shoseki
■ **YEAR:** 1991 ■ **FORMATS:** SNES

12 Tokyo Shoseki isn't a name that springs to mind when you think of the greatest developers of all time – in fact, its actual main line of business is producing textbooks – but its *Super Tennis* is one of your favourite sports games of all time. That should come as no surprise to anyone who has played the game, as it was critically acclaimed upon release due to its excellent controls and fiercely competitive multiplayer, which still draws players to tournaments today. *Super Tennis* is also presented excellently, as the court is twisted around via Mode 7 effects during little intermission cutscenes that show the player switching sides, and the players themselves are rather cute too – especially when they celebrate points scored or curse their mistakes. *Super Tennis* is still the pinnacle of videogame tennis for many of you dear readers, and if you are an avid fan of the multiplayer mode, you might just agree.

> **"MY MASTER LEAGUE ADVENTURES WERE LIKE THE GREATEST RPG EVER"** binaryRooster





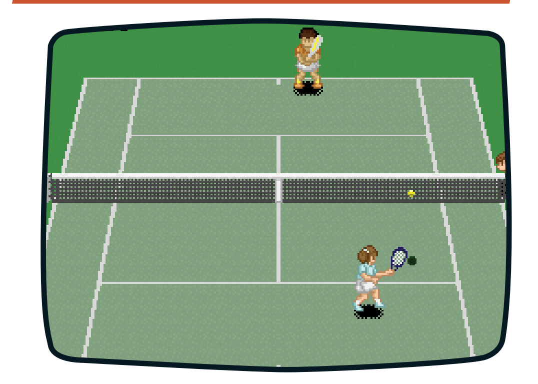
Pro Evolution Soccer 4

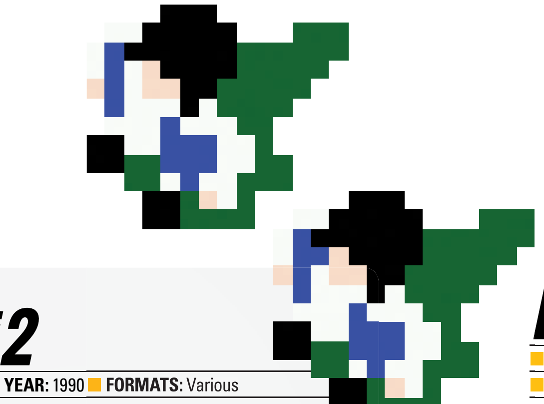
■ **DEVELOPER:** Konami Computer Entertainment Tokyo
■ **YEAR:** 2004 ■ **FORMATS:** PS2, Xbox, PC

13 Though the *FIFA* series has rarely been bested commercially, it was Konami's *Pro Evolution Soccer* that dominated much of the Noughties in critical terms, playing a better game than EA's titan year after year. For **Retro Gamer** readers it was 2004's *Pro Evolution Soccer 4* that stood out as the best – which makes a lot of sense, as the game was released at the height of its generation and was open to a broader audience due to being available on Xbox for the first time.

The game's improvements included an expanded *Master League* mode, greater editing capabilities and the addition of the referee as an on-pitch figure during the game. This all added to a game that not only looked superb but played amazingly well. Whether you played it alone or with some friends, playing some *Pro Evolution Soccer 4* was a truly excellent experience.

> **"NEVER LIKED PLAYING TENNIS, BUT I LOVED PLAYING THIS. SUBLIME IN MULTIPLAYER"** TheDude18



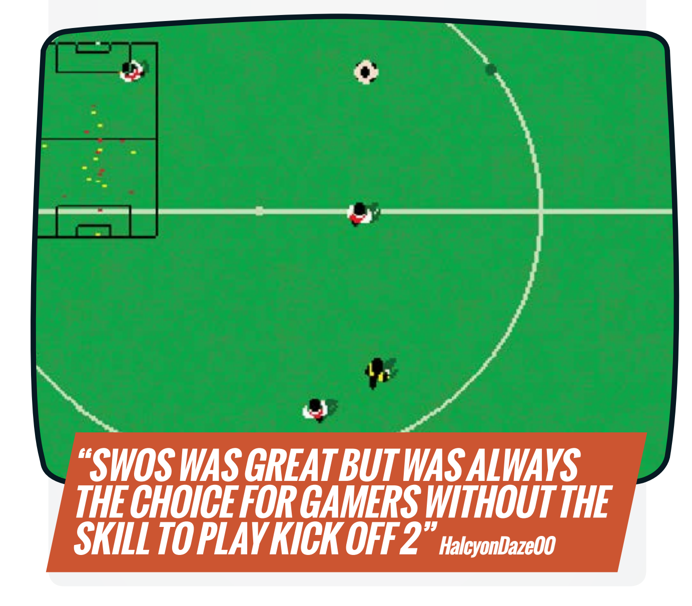


Kick Off 2

DEVELOPER: Dino Dini **YEAR:** 1990 **FORMATS:** Various

11 There's something to be said for that fact that over two decades after its release, players travel internationally to compete in *Kick Off 2* competitions and even maintain an approved competition version. The strength of feeling that Dino Dini's most famous game inspires in its supporters is enormously impressive, and the fact that it was a single vote away from achieving a top ten here reflects that.

Kick Off 2 retained the speedy top-down gameplay of its predecessor, including the control system which dispensed with the 'sticky feet' of players – requiring the ball to be trapped before passing or changing direction. It's a control system that divides players, but those who champion it praise its realism and the level of skill required to master it. Improvements over its predecessor included a far wider variety of customisation options and new abilities, such as curving shots. *Kick Off 2* was exactly the football game that the 16-bit computers needed when it arrived, and the fact that it delivered has earned it the enduring fondness of its fans.



"SWOS WAS GREAT BUT WAS ALWAYS THE CHOICE FOR GAMERS WITHOUT THE SKILL TO PLAY KICK OFF 2" HalcyonDaze00

International Track & Field

DEVELOPER: Konami
YEAR: 1996 **FORMATS:** Arcade, PlayStation

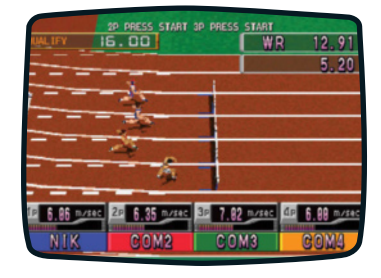
10 The arrival of 32-bit consoles in the mid-Nineties was a real boon for fans of multi-sports titles, as whether you chose the PlayStation or Saturn, you'd have an excellent title available to play. Sega's *Decathlete*, later released on the Saturn as *Athlete Kings*, was fairly shameless in its appropriation of Konami's time-tested *Track & Field* gameplay and boasted cartoonish characters with smooth, high-resolution visuals. Luckily for PlayStation owners, *Track & Field* itself was revived in full 3D by Konami at the same time and like its competitor offered some very colourful visuals, with a slightly more grounded look. Of course, the PlayStation won the day in the Nineties so it's unsurprising that the PlayStation offering is the one that makes your list here.



In gameplay terms, *International Track & Field* is largely unchanged from the original arcade titles – you'll spend much of your time bashing buttons to go faster. What has changed is the list of events, which now includes all six of the events from the original *Track & Field* as well as swimming, pole vault and triple jump from *Hyper Sports*. Shot put and discus were also included for the first time to round out the throwing events. Also, for the first time, four players could compete in events simultaneously thanks to the support for the PlayStation's multitap. The game was further enhanced by excellent presentational touches. For example, after your event was over, the camera would pan to the stadium's enormous scoreboard to display a replay and the updated scores.

International Track & Field is a game that shows the value of updating old ideas for newer technology. It wasn't anything but a new version of the games which had come before, with the added inclusion of a few more events and flashier visuals – but given how well the old games worked in the first place, it didn't need to be anything else in order to be one of the best sports games ever.





Daley Thompson's Decathlon

DEVELOPER: Ocean Software **YEAR:** 1984 **FORMATS:** ZX Spectrum, C64, Amstrad CPC

9 With most joysticks having only one button in the heyday of the 8-bit micros, Ocean had to do something else to replicate the button-mashing joy of *Track & Field*. The ultimate result was of course rapid waggling of the joystick, resulting in an enormous number of broken joysticks and abnormally muscular forearms. However, the game impressively included the full ten events (admittedly split over both sides of the tape) and every broken joystick suddenly felt worthwhile in that moment when you finally smashed a world record you'd been chasing for ages. Sequels followed, but our readers have plumped for the original smash hit.



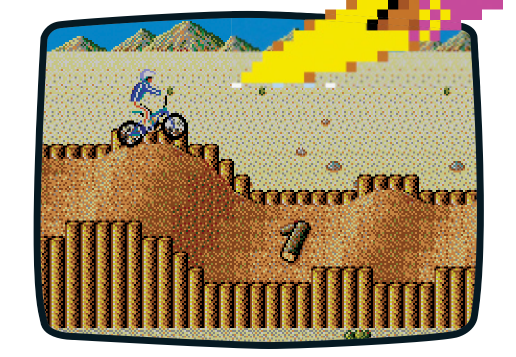
Tony Hawk's Pro Skater 2

DEVELOPER: Neversoft **YEAR:** 2000 **FORMATS:** Various

8 We distinctly remember playing *Tony Hawk's Skateboarding* shortly after the sequel was announced and wondering how it was possible to improve upon such a great game. It turned out that Neversoft had the answer: more of *everything*, such as bigger stages with more secrets, more goals to achieve in career mode, and longer combos thanks to the addition of the manual, which allowed players to perform tricks while on flat surfaces. If you ever got bored of the stages and skaters, you could even create your own, extending the lifespan of the game enormously. Add to that an excellent soundtrack comprised of hip hop, punk and metal and visuals that stretch the PlayStation and you have a near-perfect extreme sports game. We're still beating our high scores to this day.







> **"COME ON, EVERYONE WHO HAD A WII SPENT A MASSIVE CHUNK OF THEIR TIME JUST PLAYING BOWLING BY ITSELF"**
> *gunbladelad*



California Games

■ **DEVELOPER:** Epyx
■ **YEAR:** 1987 ■ **FORMATS:** Various

7 Developers often face a problem with multi-sports games: once games based on the events of both the summer and winter Olympics have been done, what comes next? The answer for Epyx was to head to the Golden State of California for some rather less strictly governed competition against beautiful sun-drenched backdrops. Six events are included: half pipe, roller skating, surfing, BMX, footbag and flying disc. Unlike the majority of multi-sports titles, these games don't involve *Track & Field*-style button smashing, rather relying on precise joystick movements and expert timing, giving players a welcome rest. *California Games* accounts for itself well across multiple formats, too – the C64 version is perhaps the most well-known, but the spotlight also shines on formats as diverse as the Master System, Lynx and even the Atari 2600, ensuring that everyone can bust it out over the summer.

Virtua Tennis

■ **DEVELOPER:** Sega AM3
■ **YEAR:** 1999 ■ **FORMATS:** Arcade, Dreamcast, PC

6 While Sega tackled a number of sports under its *Virtua* brand including football and basketball, it was *Virtua Tennis* that truly broke free of the group and it's not hard to see why. The game looked absolutely phenomenal in 1999, with detailed player models, realistic courts and amazing animation, and the gameplay matched that level of quality. Rather than requiring players time their shots perfectly with the arrival of the ball, *Virtua Tennis* allows players to anticipate an incoming ball with an early button press, allowing for stronger shots and better control. The World Circuit mode in home versions provided long-term value, as well as excellent mini-games which add significant appeal in their own right.

Wii Sports

■ **DEVELOPER:** Nintendo EAD Software Development Group 2
■ **YEAR:** 2006 ■ **FORMATS:** Wii

5 We're pleased to see that *Wii Sports* is so highly thought of amongst the **Retro Gamer** readership, as it's certainly significant as one of the best killer apps in recent history. *Wii Sports*' beauty is its simplicity – the motion controls simply require players to act as if they're playing the real sport, making it an enormously accessible game. Not every sport represented is equally good, but all of them feature some level of depth beneath the surface and the best of them will eat up hours of your life in multiplayer mode. – particularly our favourite, bowling.

> **"PLAYED THIS ONE FOR HOURS & ENDED UP WITH REALLY SORE HANDS FROM HOLDING THAT GAME PAD"** *Morkin*

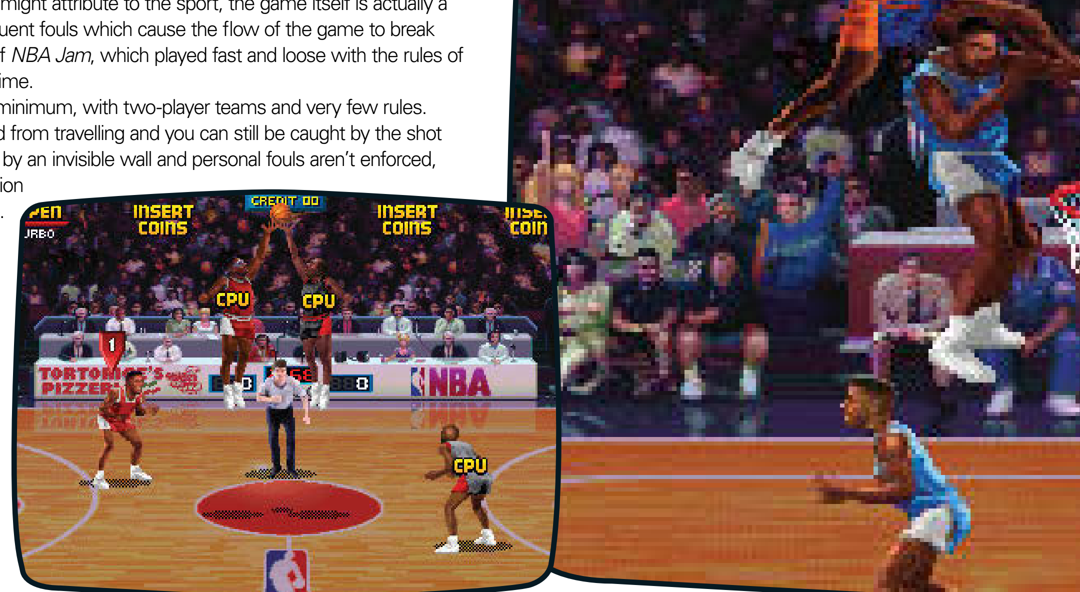
NBA Jam

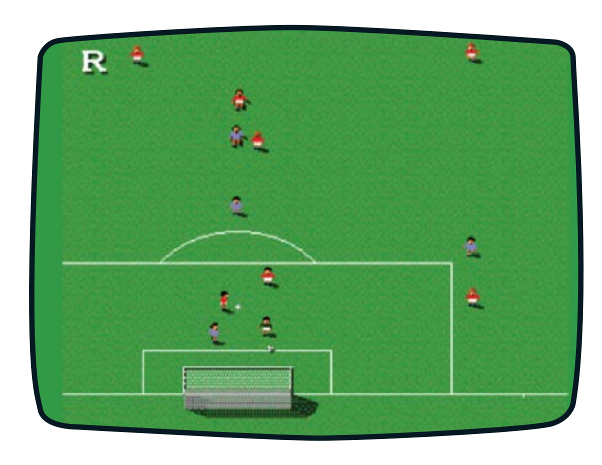
■ **DEVELOPER:** Midway ■ **YEAR:** 1993 ■ **FORMATS:** Arcade, Various

4 For all of the showmanship that non-fans of basketball might attribute to the sport, the game itself is actually a rather stuffy affair, bound up with lots of rules and frequent fouls which cause the flow of the game to break down. But while that's true of basketball, it's not true of *NBA Jam*, which played fast and loose with the rules of the real sport to create the best arcade sports game of all time.

NBA Jam cuts the game of basketball back to the bare minimum, with two-player teams and very few rules. Three-point shots are in, players are automatically prohibited from travelling and you can still be caught by the shot clock or for goal tending. However, the court is surrounded by an invisible wall and personal fouls aren't enforced, meaning that the game is a non-stop and rather rough version of the sport which is well-suited to the arcade environment. The game does add one crucial rule, though – any player that scores three baskets in a row is declared 'on fire' and will set the ball ablaze whenever they touch it, as well as having infinite turbo and better shooting ability.

The rules weren't the only things that Midway played with for added impact. Players were given the ability to perform absurd leaps in order to perform dunks, with a wide variety of flashy animations to rub salt into the wounds of your opponent every time you pulled one off. This was just one part of an amazingly well presented game, though. Digitised scaling sprites allowed you to recognise the players easily – a real novelty at the time – and the endlessly quotable commentary didn't just add to the game, but passed into the basketball lexicon.





Sensible Soccer

■ **DEVELOPER:** Sensible Software
■ **YEAR:** 1992 ■ **FORMATS:** Various

3 *Microprose Soccer* had impressed the 8-bit computer enthusiasts in the late Eighties, but it was the spiritual follow-up four years later that really captured the attention of the wider audience. *Sensible Soccer* featured a greatly expanded view of the pitch and simplified controls as compared to the likes of *Kick Off 2*, making for a more accessible game overall. For most players including the whole console audience, *Sensible Soccer* was as good as football games would get during the mid-Nineties. But for Amiga and PC owners, one game surpassed it – and it shouldn't be hard to guess which…



"SIMPLY INCREDIBLE. A PERFECT MIX OF SPORTS GAME AND ACTION" STranger81



"IT MAKES YOU CARE ABOUT YOUR PLAYERS IN A WAY ALL MODERN FIFA AND PRO EVO GAMES COULD ONLY DREAM OF" Treguard

Sensible World Of Soccer

■ **DEVELOPER:** Sensible Software
■ **YEAR:** 1994 ■ **FORMATS:** Amiga, PC, Xbox 360

2 Appearances can be deceptive. From looking at screenshots of *Sensible World Of Soccer*, you can see some slight aesthetic improvements – a nice pitchside stadium and a permanent clock in the top-left corner – but nothing that might justify such a high placement. Similarly, playing a single match couldn't tell you much more than the fact that you are now able to perform some light headers and tackles.

The improvements in *Sensible World Of Soccer* go far below the surface, you see – the game greatly expanded your options as a manager, adding a substantial amount of depth to what was already the greatest football game on the market. *Sensible World Of Soccer* has hundreds of teams and thousands of players, all of whom have individual attributes that you'll need to pay attention to, as you're afforded an unprecedented degree of tactical control over your games. Formations were just the start – players could be instructed on an individual basis, leading to a surprising sense of attachment to characters that stand only a few pixels tall.

While the game has enough single-player content to last anyone, particularly the lengthy 20 year career mode, the heart of *Sensible World Of Soccer* comes from its extremely competitive multiplayer – the enduring popularity of which led to its release on the Xbox 360, allowing for official online support. A group of dedicated players still meet up across Europe to play at the popular Sensible Days competitions to this day.

By adding to an already excellent football game, Sensible Software scored a critical smash hit. We'd have to be incredibly impressed by a game to declare that it had managed to "destroy all of its direct rivals in an explosion of apocalyptic dimensions," but those were the exact words of *Amiga Power*'s 95% review – one which reflected the general sentiment of players then and now. For **Retro Gamer** readers, *Sensible World Of Soccer* is the most beautiful version of the most beautiful game. In fact, only one sports game surpassed it in your estimation – but that's a matter we will discuss it a little more fully on the next page…





SPEEDBALL 2 BRUTAL DELUXE

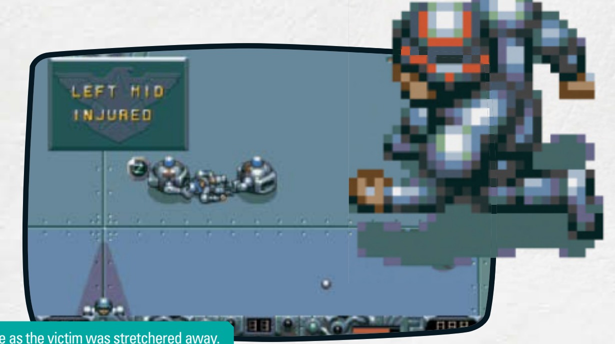


A classic that's so good it's made the top of two of our reader surveys. With that in mind we felt it was high time that David Crookes interviewed Mike Montgomery and Robert Trevellyan about their smash hit sports game

IN THE KNOW
» **PUBLISHER:** IMAGE WORKS
» **DEVELOPER:** THE BITMAP BROTHERS
» **RELEASED:** 1990
» **PLATFORM:** VARIOUS
» **GENRE:** FUTURISTIC SPORTS







» [Amiga] Knock a player out and you would not only gain valuable points but you'd be treated to a nice animated sequence as the victim was stretchered away.

1"Ice cream, ice cream," shouts the seller, the words cutting through the tension as the seconds tick away of the second half with only five points putting distance between the opposing sides. The metal thud of the ball reverberates as the players dart mesmerisingly around the cold, grey arena. But then, as a sliding tackle knocks a hapless opponent to the floor, there is a moment of stone-hearted relief as he fails to get back up again. With the medics carrying him off, Brutal Deluxe are perversely awarded ten points and the advantage swings 180 degrees. In exhaustion, the gamer puts down a battered joystick and, with a wipe of a sweaty hand, manages a triumphant, if not exhausted, smile.

This is *Speedball 2*, a game developed by the acclaimed Bitmap Brothers which was released in 1990, two years after its predecessor had caught the mass attention of players. This time around the game was set in 2105, a short while after the sport was said to have to have been reborn in an attempt to regain public interest following years of corruption and violence. As the opening titles explained, the fictional sport had been forced underground to fester in unregulated chaos. *Speedball 2* was its saviour and it brought with it a whole new set of rules.

Players who expected a straightforward sequel to *Speedball* were pleasantly surprised by the series' second outing. According to The Bitmap Brothers' co-founder Mike Montgomery, the sequel had been completely rewritten. Although the ethos of the earlier incarnation had been retained, *Speedball 2* brought with it new mechanics and an improved feature set. It also introduced Brutal Deluxe, a badly performing team that the player had to turn into champions.

In order to achieve the new feel to the game, The Bitmap Brothers made changes to the original development team. Dan Malone replaced Mark Coleman as the artist, and Richard Joseph replaced David Whittaker as the musician. Robert Trevellyan was given the role of coder, with additional input from Mike who had assumed a greater programming role during the first game. This time out, the design was credited to Bitmap Brothers co-founder Eric Matthews.

"I think the whole concept of *Speedball 2* was different," says Mike. "What we wanted to do with *Speedball 2* was all of the things that we really didn't have time to do with *Speedball*. So the viewpoint was slightly changed, the graphics were a lot better – it was a different game to a certain extent, wasn't it? I think *Speedball 2* was just a natural progression."

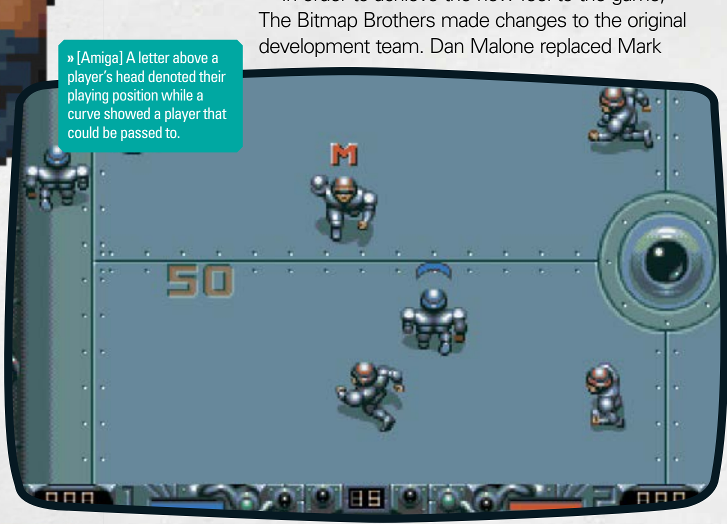
Speedball 2 was Robert's first published game. Although he had been a keen hobbyist programmer, his one previous stab at a game, for Electric Dreams in Southampton, had been canned after six months but the lead artist on that title had put Robert in touch with The Bitmap Brothers. The team was impressed by an eight-way scrolling demo which Robert had shown them running on a Commodore 64. "It convinced them that I was worth a try," he admits.

The game's lead platform was the Atari ST. "It was the less powerful of the machines, certainly when compared to the Amiga, so the idea was to make it great on the ST and then enhance it on Commodore's machine," says Robert. He said the brief was to address "all of the things that had felt limited in the first game." One of those was the playing area, which, in the original, had very little width and would simply involve players trying to get the ball up towards the goal in order to score a goal.



SPEEDBALL 101

■ *Speedball 2* is a top-down, 2D, futuristic, deep and violent game that is part-ice hockey and part-American football. Each smooth-scrolling match is split into two halves lasting 90 seconds each, during which players score as many goals as possible while grabbing extra points by nobbling the opposition or aiming the ball at point-scoring stars. Good use of tactics and the score multiplier are essential to win. Arguably the best Bitmap Brothers game.



» [Amiga] A letter above a player's head denoted their playing position while a curve showed a player that could be passed to.



FEELING HUNGRY? IT'S RICHARD JOSEPH'S FAULT

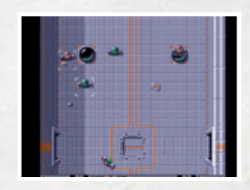
Discover why Speedball 2 loves its icecream

Quite aside from the game's intro being a computerised version of a song called *Brutal Deluxe* by a band called Nation 12 (a collaboration between the electronic pioneer John Foxx and Tim Simenon from Bomb The Bass), *Speedball 2* was able to showcase the talents of the gaming audio legend Richard Joseph who died in 2007 at the age of 53 following a short battle against lung cancer. His approach to the problem of creating memory-hogging crowd sounds was inspiring.

"Richard came in one day and said, 'Mike, I don't really want to show this audio to anyone else until you have listened to it and given your approval because I'm not really sure'" recalls Mike. "So I said, 'okay, come in', and we went into another room. He played that clip 'ice cream, ice cream' and I went, 'shit, that has just to go in, there's no argument about it, I don't care what anyone else says, that has to go in full stop.' And of course it became a famous phrase in the industry, and I even had it on my doorbell at some point. Richard was just a genius like that and we worked so well together. It's a shame that he passed away. What would he be doing now?"

HISTORY OF SPEEDBALL

Your guide to the short-lived series



SPEEDBALL

■ The Bitmap Brothers planned a game based on real tennis, the sport from which lawn tennis is derived but Mastertronic decided against it. After hitting the pub and redesigning the game on the back of a cigarette packet, *Speedball* was born. Praised for its action, it was also criticised for jerky scrolling.



SPEEDBALL 2: BRUTAL DELUXE

■ This eight-directional frantic sweat-'em-up of catch-and-throw was a huge improvement on the first game, racking up the tension by emphasising the amassing of points over the simplicity of scoring goals, and providing a level of depth rarely seen in any sports game, let alone one based on a fictional pursuit.



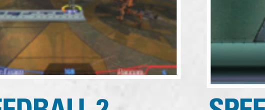
SPEEDBALL 2100

■ *Speedball 2100* was a 3D version of the series for the PlayStation, "but it didn't do too well for various reasons," says Mike Montgomery. It concentrated too much on side issues, such as the skin and hair colour of its players, and less so on refining the on-pitch experience for a new next-generation audience.



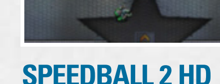
SPEEDBALL 2 TOURNAMENT

■ Released in 2007 on Steam, the same year that a faithful remake of *Brutal Deluxe* hit Xbox Live Arcade, *Speedball 2 Tournament* rode on the back of a *Half-Life 2* mod called *SourceBall*. Mike Montgomery oversaw development and the polygon characters looked markedly different. It brought online play to the game too.



SPEEDBALL 2: EVOLUTION

■ As with many retro games, *Speedball 2* found its way to iOS, Android and PSP ,and proved itself to be a timeless gem. Despite some disappointing AI, the translation was a success, allowing for the use of the virtual joystick while supporting the accelerometer of mobile phones.



SPEEDBALL 2 HD

■ The relatively recent release of this PC game gave the original game a glossy graphical sheen. It had input from Mike Montgomery and *Sensible Soccer* creator Jon Hare and it replicated the distinctive look of the 16-bit originals while serving six new *Speedball* arenas. Steam still has the game for £6.99/$9.99.

"In the first game, you only ever played 'up' the screen but in the second they wanted to expand this," he explains. By creating a larger playing area for *Speedball 2*, the developers were able to increase the number of players on the pitch from five on each side to nine, and it also allowed the game to be played with far greater freedom while allowing action in the centre of the pitch to be just as vital at that at either end, for reasons we will come to later.

"The pitch was about three times bigger because we had learned how to scroll the screen a lot better," says Mike. "The larger playing area enhanced the game, and it allowed for more things to do. It also enabled players to make better use of tactics. By having this wide, open scrolling, there were more players that would be off the field. We wanted players to work out where they may be and to plan ahead, things like that. Getting to grips with the technology and mechanics of the game in this way also let us work on the overall look and feel of the game to the point that, technically, *Speedball 2* was a lot better than the original game."

Work on the game's playing field had come first. "We made a very simple background for most of the screen, using 16x16 tiles for the main areas of the pitch because the Atari ST didn't have the graphic acceleration hardware that the Amiga had," Robert explains. "That allowed us to put some bonus features around the edges of the screen and the bouncers on the pitch. Those bouncers were the only unique elements on the pitch – the rest of it was a repeating pattern and it meant the game could flow much better."

> "The pitch was a lot bigger because we had learned how to scroll the screen a lot better"
> Mike Montgomery

During the subsequent conversion to the Amiga, the background was enhanced. The palette was upped from 16 to 32 colours and the design became, as Robert explains, "more interesting". For the ST, it was a case, he remembers, of "blasting most the screen background very quickly," and having preloaded registers, whereas on the Amiga, the team could make use of the various graphics acceleration chips. "We were squeezing everything that we could out of these machines," says Robert. "But I was this young guy with his foot in the door of the games industry and loving it. I had the confidence that I had the skills and ability to make it happen."

To aid him in developing the game (which also saw many outings on handheld and home consoles), he was able to make use of in-house library routines that The Bitmap Brothers had created. They had some basic sprite routines and code set up on the Amiga but the main issue was that the coders were working with the same amount of memory for *Speedball 2* as they were for *Speedball*. "Cramming all of that in was a problem because we had to work with the lowest spec machines," says Mike.

"There were bits and pieces and skeleton code that were useful although almost all of the code was new," Robert continues. "Even with their library of sprite routines, I saw there was an optimisation we could perform on the main loop. I also instinctively took an object-orientated approach to the software before the concept of software engineering became the way. All of this combined to make a bigger and better version of the original *Speedball* game."

It was also fast. "The frame-rate was a lot better," says Mike, "and that was important because the better it was, the better the game experience of that type of game would be. It wouldn't matter for a turn-based game but with an action game, you



» [Amiga] Although Mike Montgomery insists the game was not a violent one, brutal tactics were very much at the fore. Ouch.



» [Amiga] Goals were not the only important part of the games, amassing points via other means such as star collecting were crucial winning tactics.

» [Amiga] By collecting tokens, the game would change direction for a very small amount of time, giving the player a short-held advantage.

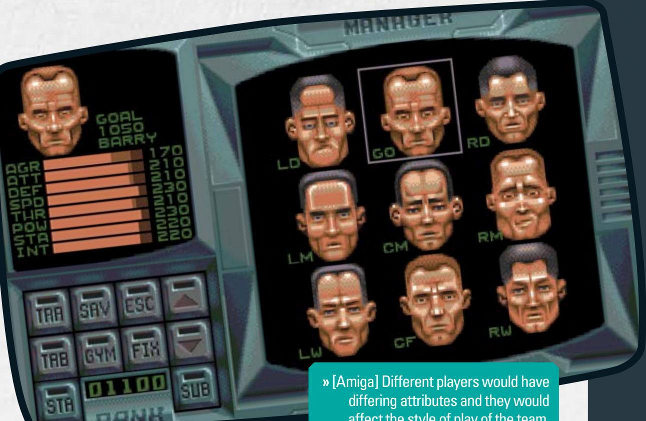
» [Amiga] The area around the multiplier could be hard-fought for this was such a crucial part of winning a match.

DEVELOPER HIGHLIGHTS

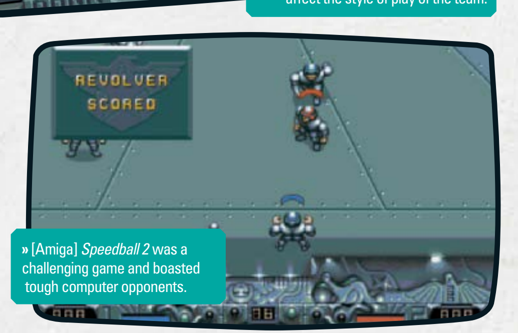
XENON
SYSTEM: VARIOUS
YEAR: 1988

GODS
SYSTEM: VARIOUS
YEAR: 1991

THE CHAOS ENGINE (PICTURED)
SYSTEM: VARIOUS
YEAR: 1993



» [Amiga] Different players would have differing attributes and they would affect the style of play of the team.



» [Amiga] *Speedball 2* was a challenging game and boasted tough computer opponents.

needed to be slick and quick." Players would have to keep an eye on the kind of players that were in view on the pitch. Icons above their heads would reveal whether the sprites were open to a pass and they would indicate their playing position – W for Winger, D for Defence, M for Midfielder and F for Forward – to allow gamers to make effective passes.

There were lots of power-ups too which would reverse the controls, increase player stats, protect players or zap opponents. Some would boost player attacks and others would give an injection of stamina. Coins could be collected and be spent on player enhancements. There was even a management element, letting gamers choose a manager before training and building up nine players and three subs (while dipping into the transfer market for star players). It was possible to develop players one by one. "The management elements were added to give greater depth," says Robert. "But we made it so that people who didn't want to think about it could click auto and have the game spend the money on enhancing players while those that did want to get stuck in were able to think about who they wanted in the team and the attributes they wished to choose."

As well as having warp holes which would instantly teleport the ball from one side of the playing space to the other, *Speedball 2*'s gameplay – whether league, cup or one-off match – was enhanced by the addition of many new features, the combined nature of which changed the approach players would have towards the game. There was an overhauled scoring system, which not only put a fresh twist on the points a goal would amass for a team, but allowed players to chalk up better scores according to the tactics they employed over the course of each half.

The most important of these were the coiled score multipliers which lay across from the centre of the arena to the left and right of the screen, each containing a set of lights and each of them capable of giving players a points bonanza. By throwing the ball up the ramp of the multiplier, it was possible to increase the number of points that was awarded for goals and other score-enhancing feats. ▶

POWER-UP

Spending a little bit of time in the gym to upgrade the attack, defence, stamina, aggression and intelligence levels of your team is well worth your while

BARGE PADS

■ By plating up the shoulders of your attackers, their ability to power forward and knock the opposing players away is greatly increased.

BRAIN BOOST

■ Attackers, above all, need to have a sense of intelligence about them so injecting their noggins with a bit of cleverness wouldn't go amiss.

BITMAP SHADES

■ Getting one-up on the opposition and ensuring they are thumped to the ground is important in *Speedball 2*. The shades enhance aggression.

POWER GLOVES

■ *Speedball 2* is all about the throwing and these Power Gloves bring with them better throwing prowess.

CHEST GUARD

■ As the opposition charges towards your team, it pays to give the defence some added protection. Defensive ability is enhanced with the chest guard.

SPEED BOOTS

■ As the name suggest these enhance the speed at which an individual player is able to chase around the pitch.

DID YOU KNOW?

A metal band from London which was formed in 1997 called itself Brutal Deluxe in homage to *Speedball 2*. It released three albums and numbered Johnny D.Brutal, Guary MacSeanlaoic and Christian D.Lux as members.



SPEEDBALL TIPS

Learn to play with Robert and Mike

SHOOT WELL

■ "You have to learn how to hit the intermediate angle on shooting," says Robert Trevellyan. "Move the joystick to the side in between pressing the button to release the ball and the ball leaving the player's hand."

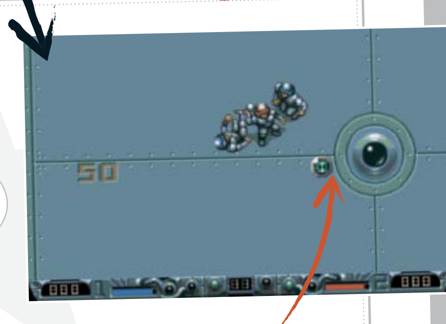
GO FOR THE LEAGUE

■ As well as rewarding a win or draw, a league point is awarded for every ten points scored in a match so a good performance against a poorer team can give you a good position. "You have a better chance to win the league than the cup if only because one loss and you're out in the knockout," says Robert. "I never won the cup."



STAR ATTACKS

■ Getting goals isn't easy but getting stars are, so make your way to the sides of the pitch and hurl away for points. Get all the stars and bank the points.



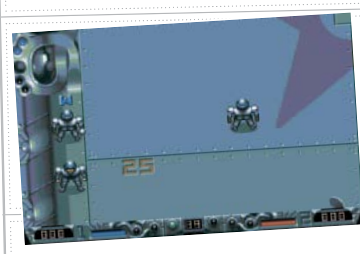


HEAD FOR THE MULTIPLIER

■ The best way to get a good lead is to ensure that every point you gain is optimised. The only way of doing that is by throwing balls into the multiplier early on.

GRAB THE TOKENS

■ Tokens affect the whole team and lasts six seconds. Freeze team tokens halt opponents, reduce team tokens lower opponent attributes, goal doors prevent goal scoring, grab ball gives you possession.



HANG AROUND

■ You should aim to linger around the multiplier and see off challenges with a few punches. Should the opposition attempt to cancel your multiples, quickly get the ball away.

USE THE BOUNCE DOWNS

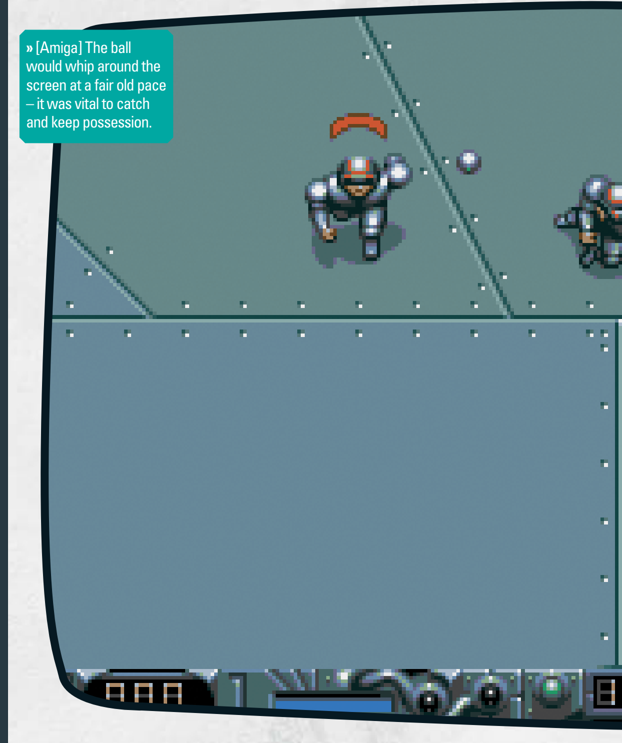
■ "You have got to watch your timing and go for the bounce downs and the electrobounce – even if the electro ball runs out, you still have a chance of winning because the goalies cannot normally get to it in time and it confuses the player." Sound advice from Mike.



BUY QUALITY

■ Playing the game on the original hardware? "You have to be fast and you need to have a high quality joystick," says Robert. "You'll destroy any poor-quality joystick."





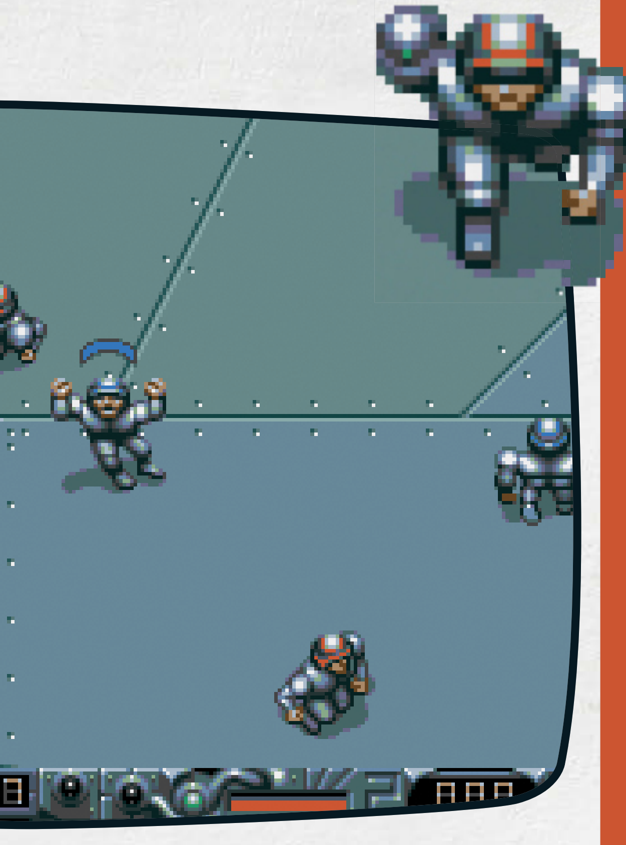
» [Amiga] The ball would whip around the screen at a fair old pace – it was vital to catch and keep possession.

When no lights were lit, a goal would be worth ten points, when one light was lit, it would be worth 15 and when two lights were lit, goals were worth an impressive 20 points. To the side of the multipliers were a series of five stars. When these were hit by the ball, they would give the player two points. But if a multiplier light was lit, that would increase to three points and if two lights were turned on, it would lead to four points. "Although the idea for this all of this was most likely thought out at the start by Eric, I don't remember the nuances of the scoring system being laid out in detail," says Robert, struggling to recall the exact timings. "A lot developed along the way."

And develop it did, with players quickly realising the true complexity that lay behind the waypoints were earned. Players who managed to get all five stars, for instance, would receive a bonus of ten points but if a multiplier light was on, that would increase to 15 and, if two were on, it would see a return of 20. Still, that wasn't it, though. In between the centre spot and the goals were bounce domes. When these were hit, the ball would fly away and lead to scores of two, three or four depending on the multiplier's status at the time.

The multiplier was also used in conjunction with the 'electrobounce', a feature that was placed further along the wall from the sets of stars. It would give the ball an electric charge that would only wear off when the ball became still or the opposition gained possession. When the ball was charged, players who tried to pick it up would be automatically tackled. The number of tackles would depend – you guessed it – on the number of lights that were lit up on the multiplier.

"The basic scoring methods and warp gates were inspired by *Pro-Pinball*," laughs Mike. "In fact, a lot is based on a pinball machine really. We just thought it would be a good idea to do something different and to say this is not a football game. We wanted something that had virtually no rules with a scoring mechanism that would let you boost your points which is where the multiplier and bounce domes came in. Part of



> **“We were squeezing everything that we could out of these machines; pushing the hardware to the limits”** Robert Trevelllyan

actually winning in *Speedball 2* wasn’t down to scoring goals but using the features to the best advantage.”

That was certainly true. One hit on a bounce dome at the right time could give a player all the advantage needed to win a match. “In football, you may get a corner and you need to score off of it,” Mike explains. “In *Speedball*, you could be in a tight position with a few seconds left, go for a bounce dome and bang, you’ve won the game. It’s what made the game exciting and it’s why people still play it. I mean, two years ago I was on the Underground in London, and two guys were talking about *Speedball 2* on the Amiga and it was, like, f**k! I would have told them that I made the game but it was too packed and I had to get off, but I heard this conversation and it was, like, f**king hell, people still talk very passionately about it.”

And yet that is only half of the story when it comes to the gameplay. While players could head for the multiplier and attempt to boost their points tally, the opposing team was able to turn the lights off and wipe away any hard-fought for advantage. The only real way to prevent the opposing team from getting the upper hand was – as in the first game – to get stuck in. As a result, *Speedball 2* was a tough, physical on-screen sport and there were a great many pixelated casualties.

But suggest that it was a violent game and Mike is quick to jump in. “There was no violence in the game at all. It was how you perceived it,” he says. “There was no blood and there was no gore. It was up to the player whether they felt it was violent or not. And that was intentional.” Still, the game was very much about tackling opposing players head on, ramming them out of the way and gaining possession. What’s more, ten points were awarded for every opponent who had to be carried off. In such circumstances, little mechanical droids would enter the field of play with their sirens and lights flashing before picking up the poor soul and taking him away for treatment.

This animation was one of a number of graphical flourishes placed in the game by Dan Malone, a talented artist who also worked on many other games for The Bitmap Brothers including *The Chaos* *Engine*, *Cadaver* and *Z*. He began working in the industry when his preferred early career path drawing comic strips floundered due to a lack of work but his loss to comics at the time was certainly gaming’s gain.

“Dan Malone brought a lot of expertise in games to *Speedball 2* and he did an excellent job,” says Mike. “That’s not to put Mark Coleman down – he was working on *Gods* and that game has superb graphics. The Bitmap Brothers was expanding at this time, and we were working on more games so we wanted a bigger pool of talent. It was a natural progression and we were also striving to be the best and to get better each time. With *Speedball 2*, we had the right sound effects, programmers, music and art and the package as a whole was what made it special.”

As always with a Bitmap game, the team spent much time on polishing it. “The Bitmap philosophy was that a game would be finished when it was finished and so it meant many days getting it right,” says Robert. “It drove me nuts but that’s how they built their reputation. We also wore out an enormous number of joysticks on the game – it was punishing it on joysticks and would make the wrist hurt.”

This all combined to make a smash hit game upon which critics lavished praise. “We weren’t surprised by that,” says Mike. “It’s a better game than the original and it was also the first two-player to hit the mass market that worked – give or take *Pong* as the first.” It was also as perfect a rendition of *Speedball* as it would ever get. “*Speedball 2* was a good game and it was hard to beat. We were very proud of it.” *

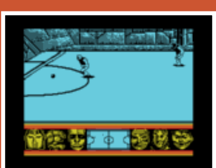


» [Amiga] By collecting coins, it was possible to soup-up the players with various extra powers to make for a better overall side.

» [Amiga] Stat attack, ahoy! Before a game, players could check out what they were up against.

GAME ON

More sports game with a heavy sci-fi influence to discover



SKATEBALL

■ *Speedball 2* is often claimed to have been inspired by the movie *Rollerball* but Mike denies it. *Skateball*, on the other hand, most likely was. As an ultra-violent futuristic version of ice hockey mixed with football, the matches could be won by destroying the opposition, or by scoring five goals.

CYBERBALL

■ In 2022, American football is played by well-armoured robots controlled from a safe distance by humans. Or at least that is the premise of Atari’s *Cyberball*, a vertically-scrolling game in which you score a touchdown by carrying the ball across the end zone while dealing with an explosive ball.



KILLERBALL

■ Chucking together roller-skating and American football, *Killerball* is a five-a-side blast which became another of gaming history’s cruel titles when it was released in 1989. Players can muscle the ball off the opposition by flattening them to the ground before trying to push the ball into stupidly small holes in the wall.



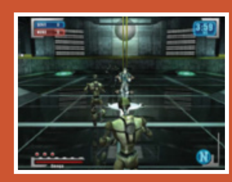
SUPER BASEBALL 2020

■ While this game has baseball’s traditional rules at its core, the Cyber Egg Stadium and presence of robot players ensures it’s anything but a contemporary riff on the sport. As well as the use of violence and land mines, money rules: good play is rewarded by cash that can be spent on upgrades.



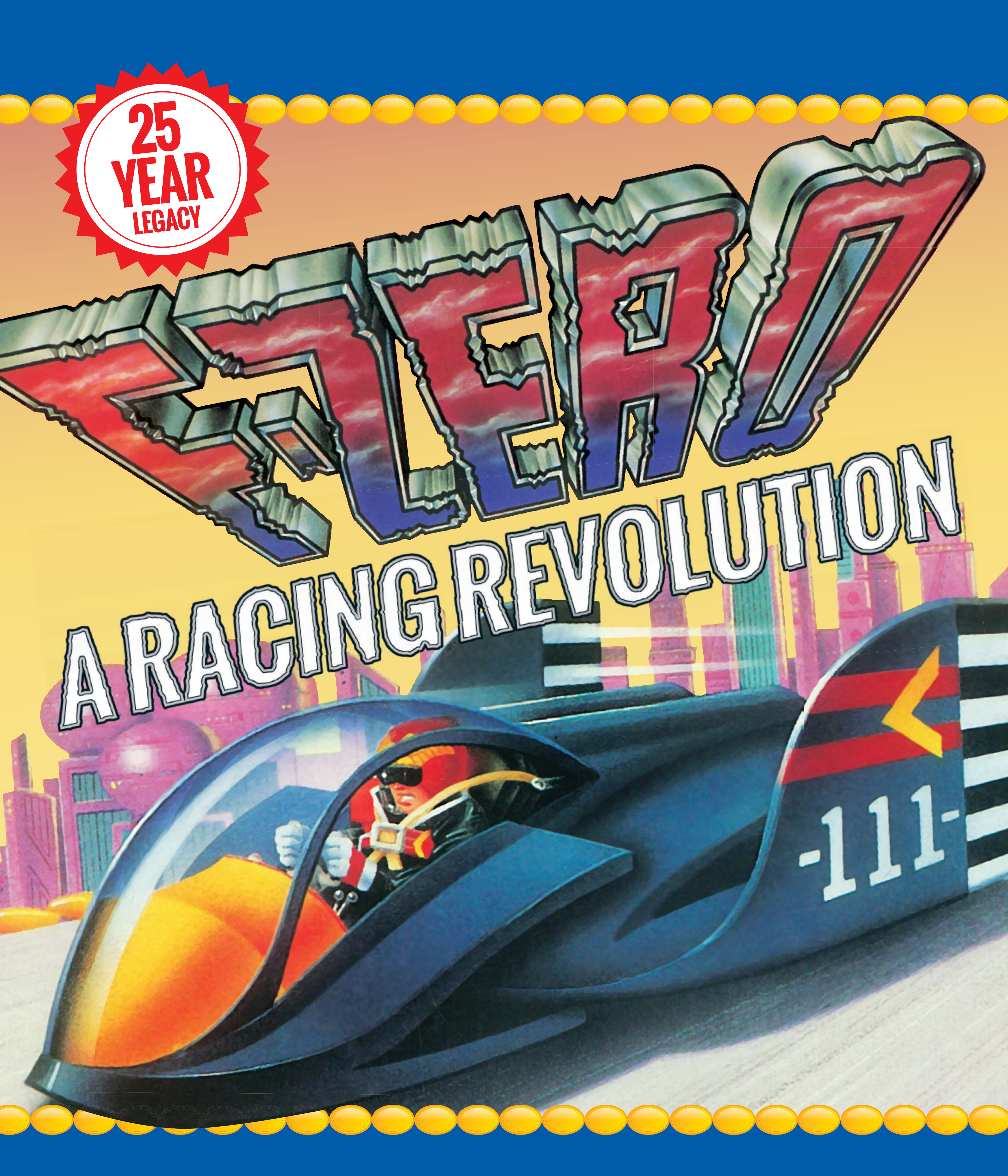
BILL LAIMBEER’S COMBAT BASKETBALL

■ The NBA’s website says Bill Laimbeer was “one of the most notorious players ever to throw an elbow,” but he used his reputation to his advantage in this game. Set in 2030, Bill has decided to chuck out the rulebook. As the name suggests, a violence is the key to winning.



DEATHROW

■ Showing that violent, futuristic sports games were not a thing of the past (ironically enough), *Deathrow* became a welcome addition to the genre upon its release as an Xbox exclusive in 2002. With players fighting their way to try to get a glowing disc through a hoop, the game has proven to be furiously fast and fun.


25 YEAR LEGACY
F-ZERO
A RACING REVOLUTION
-111-



A COMIC STRIP IS FOUND IN THE INSTRUCTIONS AND ON THE BACK OF THE BOX, ADDING SOME FUN FLAVOUR.

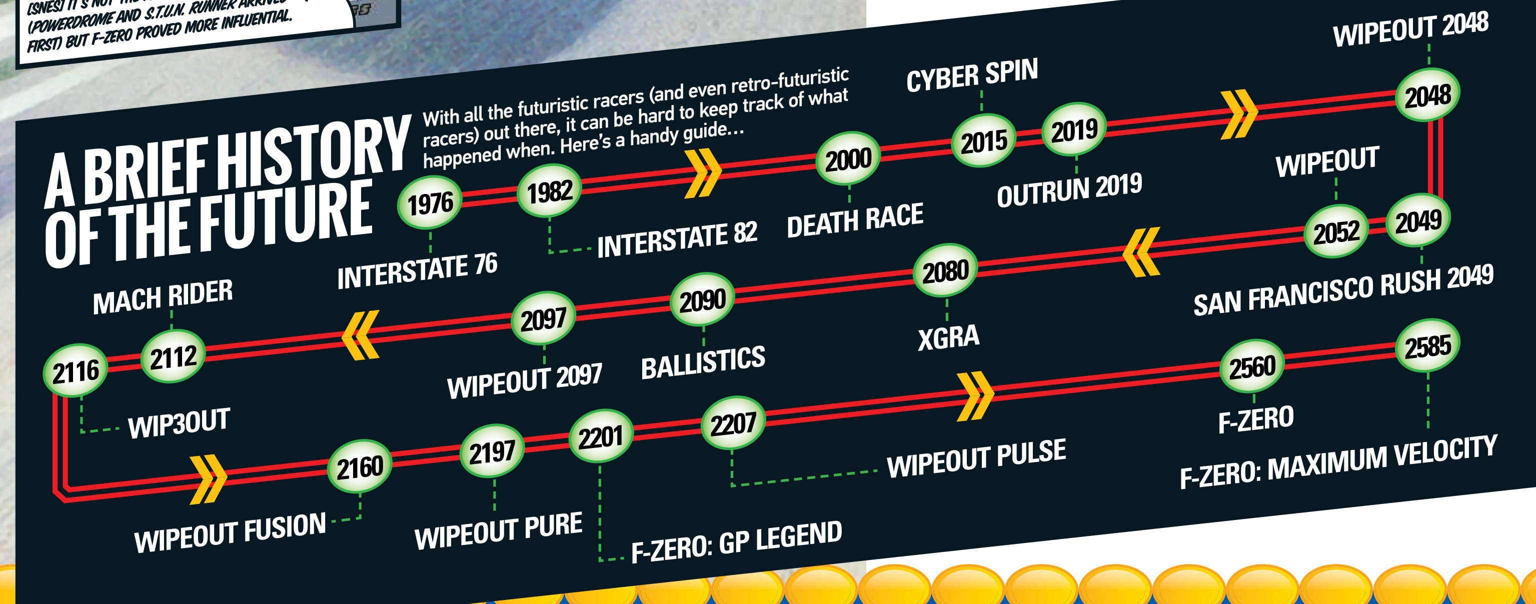
[SNES] THE MANUAL CALLS THIS A "MAGNETIC FIELD BLOCK COAT" BUT IT LOOKS LIKE ICE, AND SHOULD BE TREATED AS SUCH.

[SNES] IT'S NOT THE FIRST FUTURISTIC RACER (*POWERDROME* AND *S.T.U.N. RUNNER* ARRIVED FIRST) BUT *F-ZERO* PROVED MORE INFLUENTIAL.

MANY GAMES HAVE A FUTURISTIC THEME, BUT FEW CAN CLAIM TO HAVE SHAPED THE FUTURE QUITE LIKE NINTENDO'S SPEEDY SPECTACULAR. NICK THORPE EXAMINES THE IMPACT OF THIS MODE 7 CLASSIC…

Of all the games released for any given platform, the launch games are perhaps the most important. The ideal launch game makes a positive impact immediately by highlighting the strengths of its host platform, as well as providing a high quality title for players to get stuck into during the lean early months. *F-Zero* was the ideal launch game when it arrived with the Super Famicom in 1990, wowing critics worldwide.

To understand the impact that *F-Zero* had, you need to consider Nintendo's history of conservative business practices – and in specific, its reluctance to replace the NES. While many were questioning how the company could follow up its 8-bit machine, Nintendo didn't see the need to do so – after all, the NES was still selling very well in North America. However, by 1990 the 'pretenders' to Nintendo's throne were starting to form some solid claims with 16-bit consoles. In Japan, NEC's PC Engine had overtaken the Famicom and taken a solid chunk of the market for itself and while Sega had experienced little success with the Mega ▶





[SNES] NARROW ROADS FENCED IN BY ROUGH PATCHES ARE STANDARD FOR THE COURSE ON SAND OCEAN.

[SNES] RECHARGING YOUR POWER IS VITAL DURING LATER RACES, OAND SHOULD BE DONE AT EVERY OPPORTUNITY.

[SNES] MEMORISING THE LOCATIONS OF JUMP PADS IS CRUCIAL TO AVOIDING LONG STRETCHES OF ROUGH ROAD.

Drive in Japan, its American branch was targeting Nintendo in its advertising. Times had changed and Nintendo had to deliver a new machine.

While it had lost ground to competitors by acting slowly, Nintendo's decision to join the new generation late carried some advantages – primarily the ability to create a more advanced machine. The SNES outperformed its competitors in a variety of ways. It could display more colours on screen and had better sound capabilities, but the most exciting improvement that the SNES offered was the famous Mode 7, a graphics mode which gave developers the ability to freely rotate and scale a layer of background. This allowed for the creation of a pseudo-3D playfield which gave the illusion of stretching off into the horizon.

Of course Nintendo needed a game to showcase this unique capability, and Nintendo EAD was set to work on one with Shigeru Miyamoto in place as producer. The game that the team came up with was relatively simple – a racing game named *F-Zero*. Mode 7 was ideally suited to the task of creating roads. In the past, the drawing of roads was often handled by using limited deformation of road graphics to create curves and alter perspective, as seen in games like *Pole Position*. A recently developed alternative approach was to create a fully 3D polygonal road, as in arcade games such as *Hard Drivin'* and computer games like *Stunt Car Racer*. Mode 7, however, allowed for course features such as hairpin turns that were extremely hard to represent using traditional methods, and it could move courses around at an incredible rate with full 3D rendering at that time.

Nintendo had placed a lot of faith in *F-Zero* – as one of just two launch games in Japan, reaction to *F-Zero* would form a substantial part of players' first impressions of the machine. That faith was rewarded, as the game made a rare impact on press and public alike thanks

> "The mix of speed, vibrancy and audio was amazing"
> Steve Lycett

to its technical innovation, and many vividly remember their initial encounter with the game. "I'd seen it in *C&VG* in blurry screenshots, but I saw it in the flesh at an import game shop running on a Super Famicom," recalls Sumo Digital's Steve Lycett. "It looked like something from the future! The best vehicle is pink with flames down the side, that's a pretty bold statement. The fact it whizzed past smoothly with Vegas-esque landscapes animating away just made it visually compelling. That was the same day I decided I needed both the game and the system! The mix of speed, vibrancy and audio was amazing."

Alex Ward of Three Fields Entertainment, best known for his work on the *Burnout* and *Need For Speed* series at Criterion Games, was similarly impressed. "Back in

DID YOU KNOW?

■ The original *F-Zero* had an eight page comic within its manual, explaining the back story of Captain Falcon and his rivals.



[SNES] RIGHT-ANGLED TURNS ARE THE NORM ON SILENCE, MAKING FOR ONE OF THE TRICKIER RACES OF THE KNIGHT CUP.

the early Eighties, I played an amazing arcade game called *Star Rider* by Williams. It blew my mind, so much so that I'm still thinking about it 30 years later. Fast forward a decade. I'm reading about the Japanese version of *F-Zero*. Julian Rignall was one of the first people to play it and write about it. The SNES was Nintendo's wonder machine. Apparently it was the fastest racing game made yet."

The Mode 7 visuals that *F-Zero* employed had successfully turned heads, just as Nintendo hoped. All that was left was for the game built on top of them to keep those heads pointing in the right direction.

F-Zero is a racing game set in the year 2560, in which racers from across the universe compete for glory in an anti-gravity Grand Prix set up for the entertainment of decadent billionaires. The futuristic setting is one Nintendo had previously employed in *Mach Rider*, a NES combat racer featuring high speed action and a hero who looks suspiciously like *F-Zero*'s Captain Falcon. While *F-Zero* takes some of these elements from this previous title, the visual style in the newer game is much more fantastic – hovering vehicles racing on roads floating above densely-packed mega-cities, whereas *Mach Rider* had featured relatively conventional wheeled vehicles on traditional roads.

The futuristic setting is more than just a visual style. *F-Zero*'s races include numerous on-course features to provide additional excitement and challenge for players and while adding more variety to the courses beyond their backdrops. Despite the anti-gravity nature of the vehicles, rough roads will slow down your vehicle and icy-looking magnetic field blocking materials will cause a loss of grip. But while drivers might have experienced these hazards before, it was rather less likely that they would have had to struggle against explosive mines or magnetic fields which draw vehicles off course. Collisions with the side of the track, other vehicles and certain hazards will cause the player's vehicle to lose power, and a total loss of power results in the explosive destruction of your vehicle and a lost life.

Underneath the futuristic setting and unusual hazards, *F-Zero* is an incredibly well-constructed racing game. Players are given a high degree of ▶

Q&A: NICK BURCOMBE

The WipEout designer gives his thoughts on the F-Zero series, and explains how he sought to differentiate his own futuristic racers



Why do you think *F-Zero* had such a impact?
I think I'm right in saying it was one of the first Mode 7 games and so that sense of hurtling into the screen at 60Hz was quite a change on consoles. Games like *Rock N' Roll Racing* and *Micro Machines* typically took the isometric or top down view, but *F-Zero* was something different at the time.

How important would you say the music was to the game?
The music in *F-Zero* was one of the reasons I wanted to have a CD quality soundtrack for *WipEout*. Although I look back at *F-Zero* with great fondness, I think my view at the time was that the music just wasn't good enough quality. I know some of the catchy hook lines are great, but for me – the hardware and chip music in general just wasn't good enough and really I wanted to change that.

Did anything from *F-Zero* inspire *WipEout*?
Two things really. Firstly, Speed! The one thing I loved about *F-Zero* was the sheer speed of the game and with *WipEout* we wanted to capture some of that. Secondly the idea of skimming across the surface and not being attached to the floor with wheels. Of course games like *Powerdrome* were also an influence, but I think between *F-Zero*, *Mario Kart* and *Powerdrome* you can see where my inspiration for *WipEout* came from. Adding the dance music and then, of course, someone else bringing in the graphic design from The Designers Republic, you can probably see how it took on a life of its own.

What are the strengths and weaknesses of the track design?
The tracks are designed to suit the game, just making enough out of the jumps and shortcuts you could squeeze from it, although I'll confess – I really struggled with the very narrow ones such as Fire Field.

How do you think *F-Zero X* compared to the *WipEout* games?
I never liked the collisions or the handling to be honest – mind you I didn't like the collisions in *WipEout* either which is why they were the first thing to fix in *WipEout 2097*. And although I can see similarities, I think the omission of weapons was a bit of a let-down, but perhaps they wanted to keep it apart in terms of gameplay from the seminal *Mario Kart*. For me *F-Zero* just stopped evolving in terms of gameplay and become too hard to play.

What do you feel the N64 bought to the series?
I really didn't play it enough to comment knowledgeably, but clearly they were able to go for a lower camera position and were able to do more with track geometry because they weren't contrained to the 2D plane of Mode 7 – but the reality is that we were totally wrapped up in *WipEout* and PlayStation at the same time and so I didn't really spend a lot of time with *F-Zero X*.

Why do you feel the series works without weapons?
I actually don't think it was a plus. I suppose that's one of the reasons the racers I've made, *WipEout*, *WipEout 2097*, *Quantum Redshift*, *Jet-X* and *Table Top Racing* have all had weapons in. *F-Zero* for me became more a battle of man versus track and not man versus opponents. The track got narrower and narrower (a mistake I made on the tunnel in the first track in *WipEout*, too), but faster you go, the more space you need, or you'll be faced with only the hardest of hardcore players being able to have finished it.

Why do you think Nintendo has stayed away from the franchise in recent years?
I'd imagine the same reasons Sony also stopped developing *WipEout*. Future racing was niche, too hardcore and although loved by many, it's a genre that's failed to bring new fans in, whereas *Mario Kart* is a much more broadly appealing game and can cater for most of the mechanics in any *F-Zero* – apart from perhaps the insane speed – but as I've mentioned, this is not a good thing for newcomers, the challenge only satisfies the hardcore gamers.

CIRCUIT TRAINING

The Retro Gamer team looks back on their favourite F-Zero courses



DARRAN MUTE CITY

THERE ARE SEVERAL REASONS WHY I PICKED THIS TRACK. IT'S AN EXCELLENT SHOWCASE FOR THE MODE 7 EFFECTS AND IS A EASY TRACK TO GET TO GRIPS WITH. IT ALSO HAS THE BEST MUSIC IN THE GAME AND IT GETS ME PUMPED WHENEVER I HEAR IT. THERE ARE LOTS AND LOTS OF MEMORIES HERE.

NICK SAND OCEAN

I LOVE TECHNICAL TRACKS AND THIS IS THE FIRST OF THE DEMANDING ONES IN *F-ZERO*. WITH TWO VERY SHARP TURNS AT THE BEGINNING AND END OF THE RACE, AS WELL AS A HAIRPIN IN THE MIDDLE, SAND OCEAN IS AN IDEAL PLACE TO HONE YOUR HANDLING SKILLS.



JON FIRE FIELD

I WOULD HAVE GONE WITH MUTE CITY ON MUSIC ALONE, BUT I LIKE A CHALLENGE AND FIRE FIELD OFFERS JUST THAT. IT HAS THE BEST VARIETY OUT OF ALL THE TRACKS, A GOOD COMBINATION OF STRAIGHTS, BENDS AND TIGHT CORNERS WHILST AVOIDING THE GRIT AND OBSTACLES.

DREW BIG BLUE

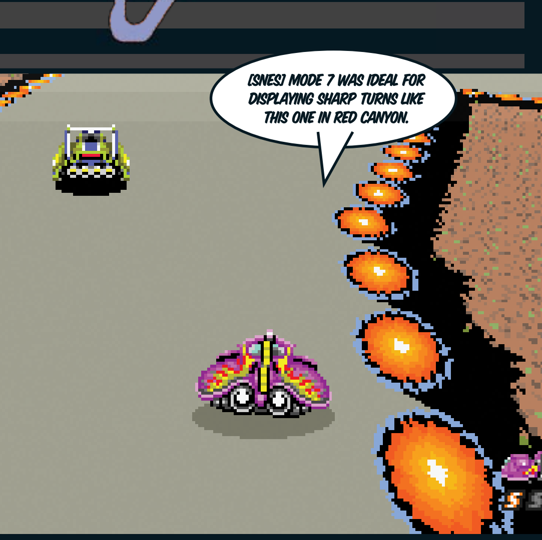
DON'T LISTEN TO DARRAN. PEOPLE LIKE TO CHAMPION MUTE CITY AS THE DE FACTO TRACK OF *F-ZERO* BUT LET'S BE HONEST, BIG BLUE IS BETTER IN EVERY WAY. EVEN THE *SMASH BROS. MELEE* ITERATION OF BIG BLUE TRUMPS MUTE CITY. OH, AND THE MUSIC IS BETTER.



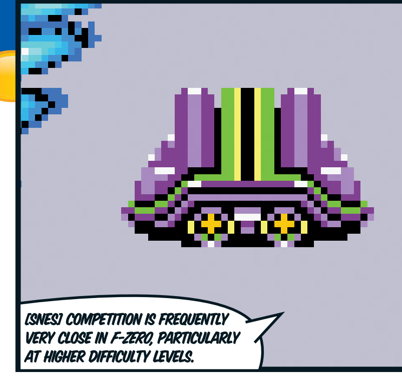
▶ control over their vehicles, thanks to the ability to shift your vehicle's weight with the L and R buttons, which combine with steering to offer greater cornering ability. You'll need to employ this ability frequently, too as the track design quickly becomes very technical, with corners set at right angles, demanding expert driving. Additionally, each of the four vehicles differs markedly in terms of handling, acceleration and top speed, meaning that you'll have to develop different approaches to each track in order to succeed. "It's pure arcade immediacy but with depth you discover as you dig into it," Steve notes. "You start off just being happy winning races, but then you progress to the Fire Stingray ship and then it's all about picking the best lines, dodging hazards with the shoulder buttons and saving up boosts for the last lap."

There's a reason you'll be happy just to win races, as success isn't something that comes easily in *F-Zero*. Races are run under elimination rules, with each lap requiring that the player doesn't fall below a certain position in the race. This starts off at the relatively easy 15th place, but by the final lap you'll need to be in the top three to finish the race. Failing to meet these requirements will see you retiring from the race early and losing a life, impeding your chances of completing the five races that make up a cup, but each completed lap rewards you with a turbo boost which can greatly aid you when used strategically. "The later leagues were very challenging," Alex recalls. Steve agrees: "It was palm sweating and proper hard on Master Class."

Between the expertly crafted gameplay and technical innovations, *F-Zero* was an immediate hit.



[SNES] MODE 7 WAS IDEAL FOR DISPLAYING SHARP TURNS LIKE THIS ONE IN RED CANYON.

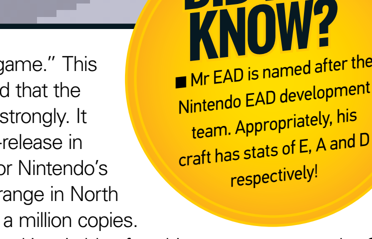


[SNES] COMPETITION IS FREQUENTLY VERY CLOSE IN *F-ZERO*, PARTICULARLY AT HIGHER DIFFICULTY LEVELS.

Critics raved about the game, with *Mean Machines*' Richard Leadbetter stating, "there'll never, ever be anything to touch this graphically on the Amiga or Mega Drive," and declaring it "the definitive console racing game." Players were similarly impressed. "I attended an American university in 1990 and one of my friends picked up the ugly purple American SNES with *F-Zero* with it the day it came out," Alex recalls. "We sessioned the game almost non-stop for two or three days straight. Just seeing the visuals takes me back to a very happy time of gaming. The dawn of the SNES was a great, great time for me."

F-Zero's criticism focused on the limited content of the game, with a 1993 retrospective review in *Super Play Gold* stating that *F-Zero* "has precious little in the way of interesting gameplay elements" and "feels rather empty." But while critics cooled on the game, it continued to serve as an excellent introductory game for new SNES players. "My first time with *F-Zero* was with the son of my grandmother's neighbours, during summer vacations in 1993," recalls Valerio Di Donato, whose studio 34BigThings is currently working on the futuristic racer, *Redout*. "This child had many games for his home console, but I was always insisting to play *F-Zero*. I just remember how fun it was – it had speed, amazing controls, drifts, energy recharge, jumps, awesome floating ships… All kinds of stuff you can't find in a normal racing game." This enduring appeal ensured that the game continued to sell strongly. It eventually secured a re-release in 1997, having qualified for Nintendo's Players Choice budget range in North America by selling over a million copies.

While a sequel seemed inevitable after this success, Nintendo didn't revisit *F-Zero* until the SNES had already been superseded by the N64 – and then only with the Satellaview, a Japan-only add-on which enabled players to download data onto rewriteable cartridges via the satellite radio service, St.GIGA. The initial four-week run of *BS F-Zero Grand Prix* began on December 29th 1996 and consisted of *F-Zero*'s 15 tracks plus a brand new Mute City IV race, contested by four new vehicles. During special Soundlink events, players could play within strict time limits alongside special radio shows designed to serve as the audio accompaniment, usually featuring high quality renditions of the in-game music or guitar rock in keeping with the game's own style. *BS F-Zero Grand Prix 2* ran for two weeks from August 10th 1997 and used the same vehicles introduced in its predecessor. Unfortunately, the Soundlink versions of *BS F-Zero Grand Prix 2* seem to have been lost to history, and video recordings serve as the only evidence of its content.



DID YOU KNOW?

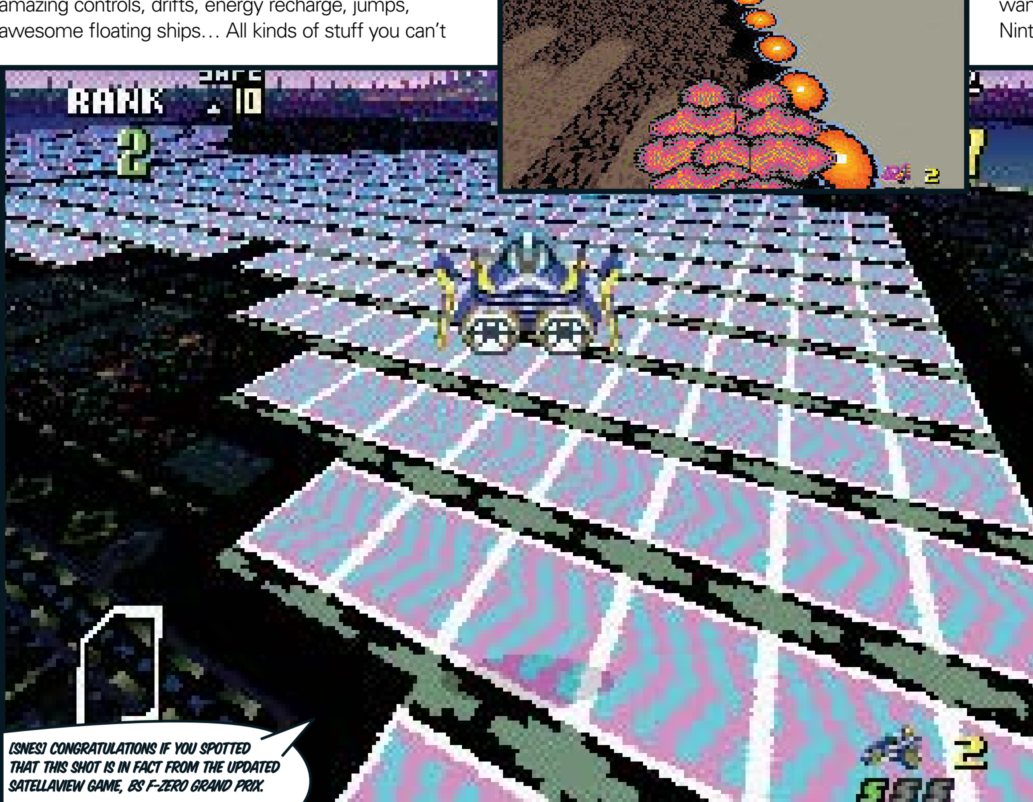
■ Mr EAD is named after the Nintendo EAD development team. Appropriately, his craft has stats of E, A and D respectively!

[SNES] AN EXPLOSIVE DEMISE AWAITS RACERS WHO LEAVE THE BOUNDARIES OF THE TRACK.

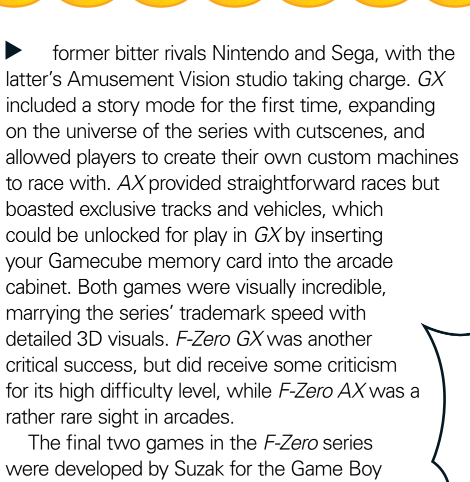
The wait for a true *F-Zero* sequel was a long one, but when *F-Zero X* was released for the N64 in 1998 it proved that the wait was worthwhile. Technological innovations allowed designers to move past the flat tracks of the original game and utilise true 3D track designs for the first time, meaning that players were subjected to loops, corkscrews and jumps, as well as racing through tunnels and on cylindrical courses. Turbo boosts were reworked to consume ship energy, bringing a strong element of risk to races, and a massively increased selection of machines let players to race how they wanted to. The game retains a striking look today, as Nintendo once again traded graphical detail for speed and a high frame-rate. A later expansion kit for the Japan-only 64DD add-on let players to design their own courses, a first for the series.

The Game Boy Advance was the next platform to receive an *F-Zero* game, with development duties falling to Nintendo subsidiary Nd Cube. Set in the year 2585, *F-Zero: Maximum Velocity* featured a new generation of racers piloting all-new machines on exclusive tracks. Despite the theme of renewal the game design was wholly lifted from the SNES original, reverting to progress-based boosts and the elimination race format. Even the visual effect was the same, with the handheld machine going one step further than the SNES by keeping the road and its surrounding scenery on individual layers, heightening the pseudo-3D effect by adding the illusion of depth. The game accompanied the Game Boy Advance at launch in 2001 and received praise from critics, particularly as it included a multiplayer mode.

The *F-Zero X* formula was further developed with *F-Zero GX* and *F-Zero AX*, Gamecube and arcade games respectively. The game was the first joint development between



[SNES] CONGRATULATIONS IF YOU SPOTTED THAT THIS SHOT IS IN FACT FROM THE UPDATED SATELLAVIEW GAME, *BS F-ZERO GRAND PRIX*.



[N64] EVEN TODAY, F-ZERO X IS AMAZING TO PLAY. IT'S SUPER SLICK, WHILE THERE ARE SOME BREATHTAKING JUMPS TO NEGOTIATE.

former bitter rivals Nintendo and Sega, with the latter's Amusement Vision studio taking charge. *GX* included a story mode for the first time, expanding on the universe of the series with cutscenes, and allowed players to create their own custom machines to race with. *AX* provided straightforward races but boasted exclusive tracks and vehicles, which could be unlocked for play in *GX* by inserting your Gamecube memory card into the arcade cabinet. Both games were visually incredible, marrying the series' trademark speed with detailed 3D visuals. *F-Zero GX* was another critical success, but did receive some criticism for its high difficulty level, while *F-Zero AX* was a rather rare sight in arcades.

The final two games in the *F-Zero* series were developed by Suzak for the Game Boy Advance, and took place in an alternate timeline which followed the events of the animated TV series *F-Zero: GP Legend*. This reboot is set in the year 2201 and follows Ryu Suzaku – or Rick Wheeler, to Western audiences – as he is revived 150 years after a near-fatal crash while in pursuit of the criminal, Zoda. As you'd expect, many existing *F-Zero* characters including Captain Falcon and Black Shadow are drawn into the story as the series progresses.

The first of the tie-in games was itself titled *F-Zero: GP Legend* and boasted a story mode based on the TV show. As with *Maximum Velocity*, the game was based largely on the SNES gameplay model, but it did bring boosting into line with the home console games and drop the elimination aspect of races. Upon release in 2003 critics recognised the quality of gameplay, but felt that it was overly familiar after *Maximum Velocity*. The 2004 follow-up *F-Zero Climax* also suffered from offering few new features, but it did boast improved Mode 7-style visuals and revised gameplay which combined the boost systems of previous games. However, the major improvement was the addition of an integrated track editor, something which hadn't been included as standard in the previous GBA games. Unfortunately *F-Zero Climax* was only released in Japan, meaning that many fans of the series never got to play what is arguably the most refined version of the original formula.

> **"We sessioned the game almost non-stop for two or three days straight"**
> Alex Ward

While there hasn't been a new *F-Zero* game since its brief flurry of sequels ended over a decade ago, the series' place in history is secure as its influence extends far beyond its direct lineage. The original game was a powerful demonstration of Mode 7 and it became a signature feature of the SNES, appearing in acclaimed titles such as *Super Mario World* and *Final Fantasy VI*. For racing games, *F-Zero* became the model to which many other SNES racing games adhered. Games like Seta's *Exhaust Heat* and KAZe's *Uchuu Race: Astro Go! Go!* owe a debt to *F-Zero*, and they're far from the only third-party games to do so.

As for Nintendo itself, it wasn't done with developing the use of Mode 7 or fantasy racing games. Nintendo EAD would go on to develop *Super Mario Kart*, another Mode 7 racer which featured simpler tracks but revolutionised the use of hazards by allowing the players to deploy them as weapons. The driving force behind the development of *Super Mario Kart* was to create a game which offered the multiplayer which *F-Zero* had lacked. The fact that this was achieved is a technical feat, which often goes unrecognised as people concentrate their praise on the incredibly addictive qualities of the multiplayer in *Super Mario Kart*.

The longest-lasting part of *F-Zero*'s legacy with Nintendo has been its appealing comic book world. While the series hasn't been revisited as frequently as the likes of *Mario* or *Zelda*, *F-Zero* receives recognition from Nintendo in games such as *Super Smash Bros.*, in which themed stages are commonly included and Captain Falcon is a mainstay. Additionally, the game recently received recognition in the *Mario Kart* series, with the Mute City and Big Blue tracks appearing in *Mario Kart 8* as part of the game's downloadable content offering.

However, it wasn't just Nintendo and its developers that were impacted by *F-Zero*. Technologically, Sega recognised the value of Mode 7 and granted the Mega Drive similar capabilities via the Mega-CD add-on. Games like *BC Racers* often employed the Mega-CD's ability to scale sprites as well as backgrounds, providing trackside details such as trees and houses. While these made for more convincing pseudo-3D environments, games on Sega's hardware struggled to achieve the speed displayed by *F-Zero*. Meanwhile, racing games were established as a key way to launch a platform. Steve contends that *F-Zero* "showed how racers are a brilliant way to showcase hardware, something Namco did with *Ridge Racer* on the PlayStation."

Beyond the technological impact of *F-Zero*, there was its legacy in terms of game design. Over the years, *F-Zero* has been name-checked repeatedly as a variety of futuristic racers have drawn varying degrees of inspiration from Nintendo's game, from the *Extreme-G*

DID YOU KNOW?

■ *F-Zero: Maximum Velocity* is the only *F-Zero* game not to feature the original characters – Captain Falcon, Dr Stewart, Pico and Samurai Goroh.

[GBA] CREATED BY SUZAK FOR THE GAME BOY ADVANCE, F-ZERO CLIMAX HAS PLENTY OF TRACKS, WITH OVER 50 TO RACE ON.



MUTE CITY MELODIES

F-Zero's soundtrack has been widely revered and covered – here are some of our favourites

SMOOTH MCGROOVE
www.youtube.com/watch?v=l7nVJbl9bhU
■ We've got a soft spot for Smooth McGroove, and this acapella rendition of the Mute City theme is amongst his best work. The way the vocal tracks are overlaid sounds oddly like the way the SNES plays samples, too.

TOM WINTER
www.youtube.com/watch?v=qeKEsgmYg0I
■ With the electric guitar so prevalent in *F-Zero* soundtracks, the idea of an acoustic rendition of the Mute City theme might seem sacrilegious. It actually works out well, though – we'd urge you to give it a listen.

TOXICXETERNITY & MAXIMUMHAMBURGERS
www.youtube.com/watch?v=9f-Iza7vOlI
■ This medley is probably the closest to the original game's soundtrack, and covers the SNES soundtrack. It's one of the more elaborate productions out there too.

MUSIC BY PEDRO
www.youtube.com/watch?v=0hXY2nQ20jI
■ Perhaps the most unusual cover on offer here, we love this saxophone rendition of the Mute City theme. Not only is it unique, there's some great freestyle play in the middle of the track which sets it apart from other covers.



[GAMECUBE] WE'RE PRETTY SURE THAT F-ZERO GX REMAINS ONE OF THE MOST BEAUTIFUL FUTURISTIC RACERS THAT HAS EVER BEEN MADE.

[GBA] CREATED BY SUZAK, F-ZERO GP LEGEND IS AN ADAPTATION OF THE ANIME SERIES THAT WAS BASED ON F-ZERO.

series to the likes of *Hi-Octane* and *Cyber Speedway*. Most of these games fell by the wayside quickly, a fact that Valerio attributes to Nintendo's stellar game design. "*F-Zero* works because everything in it works, and every game that tried to follow *F-Zero* and failed because something was missing."

F-Zero is one of the defining influences on its own closest competitor, Sony's *WipEout* series. "Whilst there had been futuristic racers before, *F-Zero* opened the door to many more. Without it there wouldn't be a *WipEout*," asserts Steve. Psygnosis nailed a distinctive formula early on by fusing *F-Zero*'s speed and setting with the weaponry of *Mario Kart*, before adding its own style and 3D visuals. Later games in both series have been known to pinch each other's tricks, from the adoption of attacking moves in *F-Zero X* to *WipEout 2097*'s addition of vehicle destruction and pit lanes.

"Futuristic racers have never struck the goldmine," states Alex, "but then, maybe technology was always holding them back." He's got a point. *F-Zero* has now been absent from our consoles for over a decade, and all of its competitors are dormant. But even with that point made, there's an allure to futuristic racing games that he finds hard to resist. "I remember giving serious thought to having a crack at one after watching *Tron: Legacy* on a transatlantic flight – then scrawling a basic outline out on a napkin," Alex confesses.

That allure holds for Valerio and his team on *Redout*, too. "*F-Zero* was the first to introduce key aspects in terms of visuals and gameplay and it's exactly what we are trying to achieve," he explains. "We pushed the visual contrast to the extreme, blending low poly models with the amazing shaders and visual effects that *Unreal Engine 4* allowed us to create. The driving model is completely physics-based, trying to innovate in a field that has been static since *F-Zero*." For Steve, the series has been a source of inspiration for his own racers."We also took a leaf out of *F-Zero X* and *GX* with the insane 3D track design they have so we'd get our own rollercoaster ride feel."

It's notable that with the sublime *Super Mario World*, Nintendo could have sold the game on the basis of Mode 7 alone. "There are a lot of games nowadays that I like to call 'engine showoff', games where technology is mostly there to sell the licence of the game engine to other companies," Valerio says. "*F-Zero* could have been the same, if they didn't put this much effort into really making a great game. And that's my definition of masterpiece: a perfect union of innovation and design." Masterpiece is an adequate description for a game which, even after 25 years, defines its subgenre and continues to fascinate developers and players alike. "I'd love to work on the *F-Zero* franchise," Steve says. We can see why. As an iconic SNES game, an iconic racing game and an iconic Nintendo world, *F-Zero* boasts a proud heritage. The chance to add to it would be irresistible. *

DID YOU KNOW?
■ At just 770kg, Gomar & Shioh's Twin Noritta is the lightest of all the *F-Zero* craft. Black Shadow's Black Bull is the heaviest at 2340kg.

MEAN MACHINES

The original roster of four vehicles has expanded over the years – just check out this starting grid…



BLUE FALCON
CAPTAIN FALCON
BODY: B ▪ BOOST: C ▪ GRIP: B
ORIGIN: F-ZERO



GREEN PANTHER
ANTONIO GUSTER
- BODY: A
- BOOST: B
- GRIP: D

ORIGIN: F-ZERO X



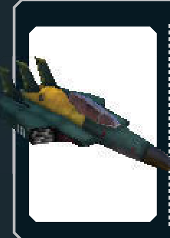
QUEEN METEOR
MRS ARROW
- BODY: E
- BOOST: B
- GRIP: B

ORIGIN: F-ZERO X



IRON TIGER
BABA
- BODY: B
- BOOST: D
- GRIP: A

ORIGIN: F-ZERO X



HYPER SPEEDER
BEASTMAN
- BODY: C
- BOOST: C
- GRIP: A

ORIGIN: F-ZERO X



MAD WOLF
BILLY
- BODY: B
- BOOST: B
- GRIP: C

ORIGIN: F-ZERO X



BIG FANG
BIO REX
- BODY: B
- BOOST: D
- GRIP: A

ORIGIN: F-ZERO X



BLACK BULL
BLACK SHADOW
- BODY: A
- BOOST: E
- GRIP: A

ORIGIN: F-ZERO X



CRAZY BEAR
DR CLASH
- BODY: A
- BOOST: B
- GRIP: E

ORIGIN: F-ZERO X



GOLDEN FOX
DR STEWART
BODY: D ▪ BOOST: A ▪ GRIP: D
ORIGIN: F-ZERO



MIGHTY TYPHOON
DRAQ
- BODY: C
- BOOST: A
- GRIP: D

ORIGIN: F-ZERO X



GREAT STAR
MR EAD
- BODY: E
- BOOST: A
- GRIP: D

ORIGIN: F-ZERO X



BLOOD HAWK
BLOOD FALCON
- BODY: B
- BOOST: A
- GRIP: E

ORIGIN: F-ZERO X





TWIN NORITTA
GOMAR & SHIOH
- BODY: E
- BOOST: A
- GRIP: C

ORIGIN: F-ZERO X



ASTRO ROBIN
JACK LEVIN
- BODY: B
- BOOST: D
- GRIP: A

ORIGIN: F-ZERO X



LITTLE WYVERN
JAMES MCCLOUD
- BODY: E
- BOOST: B
- GRIP: B

ORIGIN: F-ZERO X



PINK SPIDER
DAI SAN GEN
- BODY: C
- BOOST: C
- GRIP: A

ORIGIN: F-ZERO AX



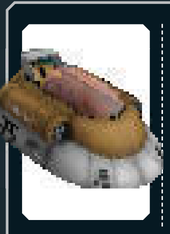
WONDER WASP
JOHN TANAKA
- BODY: D
- BOOST: A
- GRIP: D

ORIGIN: F-ZERO X



RAINBOW PHOENIX
PHOENIX
- BODY: B
- BOOST: B
- GRIP: C

ORIGIN: F-ZERO AX



SILVER RAT
DAIGOROH
- BODY: D
- BOOST: A
- GRIP: D

ORIGIN: F-ZERO AX



MIGHTY HURRICANE
ROGER BUSTER
- BODY: E
- BOOST: B
- GRIP: B

ORIGIN: F-ZERO X



NIGHT THUNDER
SILVER NEELSEN
- BODY: B
- BOOST: A
- GRIP: E

ORIGIN: F-ZERO X



KING METEOR
SUPER ARROW
- BODY: E
- BOOST: B
- GRIP: B

ORIGIN: F-ZERO X



WHITE CAT
JODY SUMMER
- BODY: C
- BOOST: C
- GRIP: A

ORIGIN: F-ZERO X



GROOVY TAXI
PJ
- BODY: B
- BOOST: D
- GRIP: B

ORIGIN: F-ZERO AX



SUPER PIRANHA
KATE ALEN
- BODY: B
- BOOST: C
- GRIP: B

ORIGIN: F-ZERO X



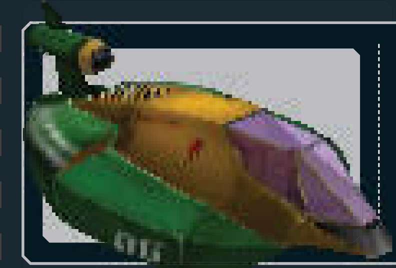
RED GAZELLE
MIGHTY GAZELLE
- BODY: E
- BOOST: A
- GRIP: C

ORIGIN: F-ZERO X



DARK SCHNEIDER
DEATHBORN
- BODY: A
- BOOST: B
- GRIP: D

ORIGIN: F-ZERO GX



WILD GOOSE
PICO

BODY: A ▪ BOOST: B ▪ GRIP: C

ORIGIN: F-ZERO



■ *F-Zero's* manual claims that Mute City was originally called Mutant City, but in the *GP Legend* story it is said to be the former New York.



SONIC PHANTOM
THE SKULL
- BODY: C
- BOOST: A
- GRIP: D

ORIGIN: F-ZERO X



FAT SHARK
DON GENIE
- BODY: A
- BOOST: B
- GRIP: E

ORIGIN: F-ZERO AX



SPACE ANGLER
LEON
- BODY: C
- BOOST: C
- GRIP: A

ORIGIN: F-ZERO X



BUNNY FLASH
LILY
- BODY: D
- BOOST: B
- GRIP: A

ORIGIN: F-ZERO AX



SPARK MOON
PRINCIA
- BODY: B
- BOOST: C
- GRIP: B

ORIGIN: F-ZERO AX



DEEP CLAW
OCTOMAN
- BODY: B
- BOOST: B
- GRIP: C

ORIGIN: F-ZERO X



ROLLING TURTLE
QQQ
- BODY: A
- BOOST: D
- GRIP: B

ORIGIN: F-ZERO AX



WILD BOAR
MICHAEL CHAIN
- BODY: A
- BOOST: C
- GRIP: C

ORIGIN: F-ZERO X



MAGIC SEAGULL
SPADE
- BODY: B
- BOOST: A
- GRIP: E

ORIGIN: F-ZERO AX



COSMIC DOLPHIN
DIGI-BOY
- BODY: E
- BOOST: A
- GRIP: C

ORIGIN: F-ZERO AX



DEATH ANCHOR
ZODA
- BODY: E
- BOOST: A
- GRIP: C

ORIGIN: F-ZERO X



FIRE STINGRAY
SAMURAI GOROH

BODY: A ▪ BOOST: D ▪ GRIP: B

ORIGIN: F-ZERO

Special thanks to Dan Stephenson for lending us his mint copy of F-Zero and Mark Hogg and Trevor Briscoe for their additional help



ARCADE PERFECT



Its sheer power may have hindered its success, but SNK's console remains highly desirable. Damien McFerran discovers why…

Some retro systems are remembered fondly by the players of today because they offer vibrant and engaging gameplay experiences that continue to resonate throughout the years, but in the case of SNK's Neo-Geo system – which turns 25 this year – the opposite is often true. It is famous not because gamers owned and savoured it, but because it was always so tantalisingly out of reach. Due to the high cost of the console and its games, to be a Neo-Geo owner in the early-Nineties was to be part of a very exclusive club, and unfortunately for the vast majority of those teenage players who gazed longingly at screenshots of SNK's latest games in magazines of the era, membership was something they could only dream of. "The Neo-Geo was the console that few people I knew owned and was mostly only ever seen briefly in the pages of videogame magazines or in an arcade at the seaside," says Jonathan Town, a former Nintendo UK community manager and fully-committed Neo-Geo devotee. "It was a living myth, but without the internet or YouTube to clarify any childish claims, we never knew what was true and what was not. I think here in the UK, because the Neo-Geo never really had a proper release, it was largely an unknown entity. We all wanted one."



The reason the Neo-Geo AES (short for Advanced Entertainment System) cost so much was because it was effectively an arcade machine in console clothing. The idea was simple: instead of having to replace the entire arcade board inside a cabinet, amusement centre owners could simply invest in a Neo-Geo cabinet which contained the hardware required to run the games and swap out the bulky cartridge to keep things fresh. The arcade version of the Neo-Geo – known as Multi Video System, or MVS for short – used massive, hardback-sized cartridges which could be replaced quickly, easily and – compared typical arcade boards – relatively cheaply. In comparison, standard JAMMA arcade boards were large, delicate and fiddly to replace. While AES and MVS carts weren't interchangeable, the software on them was identical. When SNK said 'arcade perfect', it really meant it – and the system's arcade pedigree would make the AES so desirable in the eyes of players.

"In the Nineties, arcades were still pretty common in the United States," explains hardcore Neo-Geo collector Jeremy Forrest. "Neo-Geo was literally everywhere. I would go to the grocery store with my parents and *Ninja Combat* was there to greet me. When I would sneak deeper into town than I was supposed to, crossing dangerous intersections against the will of my parents, it was because *League Bowling* and *Samurai Shodown II* were there at the bowling alley, waiting for me." To the kids of the Nineties, the sheer notion that it was possible to purchase a home console that was capable of replicating the same performance of a arcade machine was absolutely mind-boggling."

That mind-boggling performance came at a price, though - it was simply too expensive for the average consumer. The Gold System (two controllers and a choice of *Nam-1975* or *Baseball Stars Professional*) launched at $649 in the States in 1990. The SNES in comparison launched a year later at $199. A Silver System package did arrive without a second controller or game for $399, but it was still an expensive proposition, particularly when you consider that the games themselves were around four times as much as their competitors'. SNK's premium price, for an admittedly premium console ultimately meant it could never be a huge commercial success.

Another issue that affected SNK's success was the machine's software library. Without the support of coin-op heavyweights such as Capcom, Konami and Namco, SNK set about creating its own franchises which would attempt to cover all the major genres, but it would be the one-on-one fighting genre where it would arguably find its most success, although even this wasn't without drawbacks. "The first SNK game that stuck in my head was *Samurai Shodown II*, because it was installed at my local diner, so I played that a lot," says James Mielke, a games journalist-turned-developer who has enjoyed tenures at Q-Games, Q Entertainment and now resides at Square Enix subsidiary Shinra Technologies – as well as running Japanese indie development event BitSummit. "Later, if memory serves, SNK popped on to my radar once again when my local pizza place in NYC's East Village installed a World Heroes cabinet next to *Street Fighter II*." In terms of timing, it was just perfect. One-on-one fighters had become the genre of choice off the back of *Street Fighter II*'s success, and SNK capitalised on this superbly.

Even today many consider the Neo-Geo to be a one-trick pony, and it is to a point due to its overwhelming, but diverse range of fighting games. It lacks the killer RPGs, platformer and racers that were so popular on its rivals, but other genres are well represented thanks to the likes of *Blazing Star*, *Metal Slug*, *Cyber-Lip*, *Magical Drop*, *Pulstar*, *Shock*

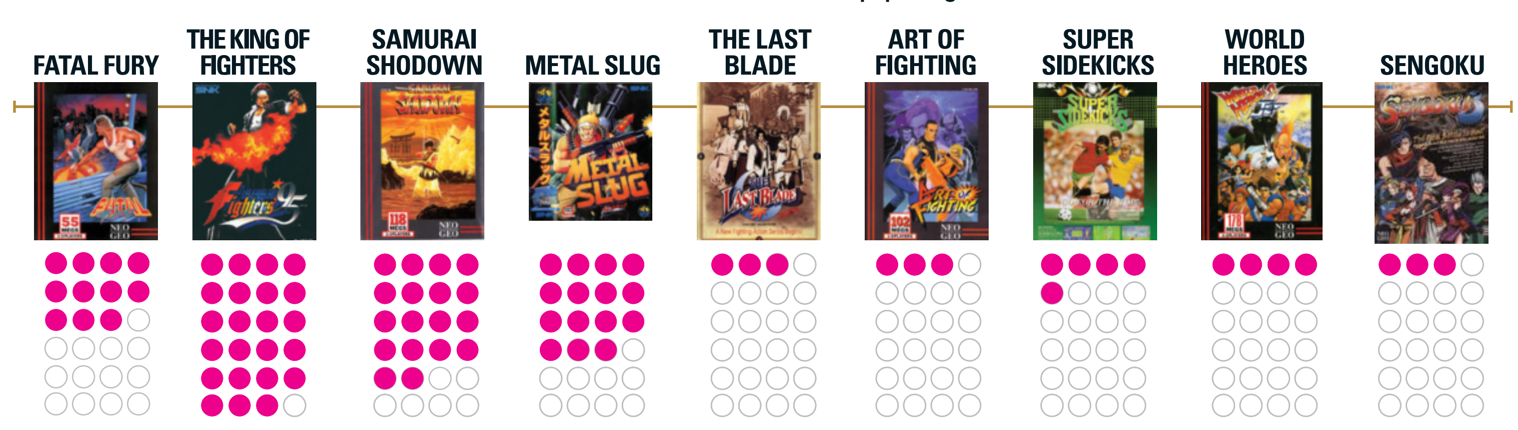
Did You Know?

■ While the Neo-Geo was marketed as a 24-bit system to differentiate it from its 16-bit rivals, it was actually sported a 16-bit 68000-chipset twinned with an 8-bit Z80 coprocessor.



Franchise Starter

The Neo-Geo kicked off a lot of popular games series



Console war

Key Stats for the Neo Geo, SNES and Mega Drive



Did You Know?

■ Official software support for the machine ran from 1990 until 2004, but unofficial, unlicensed games are still being produced for the console.

NEO-GEO

- ★ **CPU:** Motorola 68000 (12 MHz), Zilog Z80 coprocessor (4 MHz)
- **RAM:** 64KB SRAM (main), 84KB SRAM (video)
- ★ **COLOUR PALLETTE:** 65,536
- ★ **COLOURS ON-SCREEN:** 4096
- ★ **SPRITES ON-SCREEN:** 380
- ★ **YEARS ACTIVE:** 1990-2004
- **UNITS SOLD:** 980,000 (as of 1997)
- **PRICE:** $649

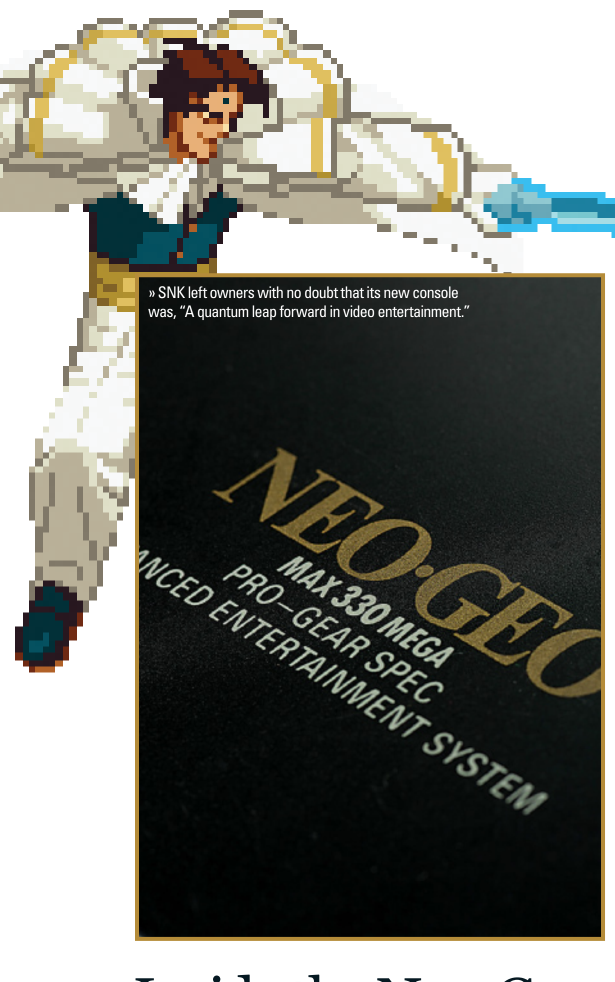
SNES

- **CPU:** Custom 65c816 (3.58 MHz)
- **RAM:** 128 KB (main), 64 KB (video) ★
- **COLOUR PALLETTE:** 32,768
- **COLOURS ON-SCREEN:** 256
- **SPRITES ON-SCREEN:** 128
- **YEARS ACTIVE:** 1990-1999
- **UNITS SOLD:** 49 million ★
- **PRICE:** $199

MEGA DRIVE

- **CPU:** Motorola 68000 (7.6 MHz), Zilog Z80 sub-processor
- **RAM:** 64 KB (main), 64 KB (Video)
- **COLOUR PALLETTE:** 512
- **COLOURS ON-SCREEN:** 64
- **SPRITES ON-SCREEN:** 80
- **YEARS ACTIVE:** 1988-1997
- **UNITS SOLD:** 40 million (estimated)
- **PRICE:** $189 ★

★ **HIGHEST STATISTICS**



» SNK left owners with no doubt that its new console was, "A quantum leap forward in video entertainment."

▶ *Troopers*, *Windjammers* and *Twinkle Star Sprites*.

While the Neo-Geo's library is somewhat small, it's packed with classics – making the act of picking out one title which defines the system near-impossible. "You might as well ask a mother which child is her favourite!" Jeremy laughs. "If I had to pick one it would have to be *The Last Blade*. All the characters are appealing and fun to master. The animation is smooth, and the controls are spot-on. I also absolutely love the deflection system, it makes the game so much more tactical. To me, *The Last Blade* is one of the few games of the era that transcend just being a game, and experimented being a work of art. In a time when games were just trying to be profitable, *The Last Blade* was trying to be an interactive, masterful work of art." Indeed, this seminal fighting title is a shining example of the level of perfection SNK had managed to achieve within the genre, and, unsurprisingly, remains in high demand among collectors. For James, another famous Neo-Geo fighter is close to his heart. "*Garou: Mark Of The Wolves* is still one of the best 2D fighting games, and it really stood out from the rest of the *Fatal Fury* series," he says. "Its primary competition at the time, *Street Fighter III*, got a lot more attention, but I think *Garou* is the better game."

While other systems have come and gone, the Neo-Geo continues to make its presence felt in collector's circles, generating intense interest among hardcore players and videogame fans in general. "I reckon this is because it was one of the purest, most hardcore gaming systems around," says James. "It was all about the games. Also, the underdog always tends to hold a higher reputation, and it stuck around for a long time. The system was loaded with classic games, and the controllers and arcade sticks were iconic." A huge factor in this prolonged fame is down to the sheer desirability of the console, but there's more to it than that. "A lot of Neo-Geo fans would tell you Neo-Geo is special to them as it represents something they could not obtain as a child," says Jeremy. "In a way I can understand this because I remember begging my parents to get me one, and the feeling I received after obtaining one as an adult. I feel the console is still beloved today because the Neo-Geo has such a solid

Did You Know?

■ The AES home system was initially intended for commercial locations such as hotels and bars, but consumer reaction convinced SNK to produce a domestic version.

Inside the Neo-Geo

A look at the guts that powered SNK's console

GRAPHICS PROCESSING UNIT

■ This custom chipset gives the Neo-Geo a real edge over its 16-bit rivals, allowing the console to scale and manipulate sprites smoothly. 380 sprites can be rendered simultaneously.

THE CPU

■ The brain of the Neo-Geo is a Motorola 68000, although some units had equivalent chips produced by Toshiba or Hitachi. The CPU is clocked at 12 MHz.



"We had to use the original Neo-Geo code – we weren't allowed to re-code the games"

Jim Philpot

library of games. If the console consisted solely of titles like *3 Count Bout* and *Legend Of Success Joe* we wouldn't be having this discussion."

As the Nineties wore on, SNK's console began to struggle, unable to compete with its cheaper peers and the advent of 3D gaming that became the standard thanks to the PlayStation. The platform continued to receive solid software support, though. However, 2001 brought with it financial problems. Following SNK's purchase by pachinko machine maker Aruze, SNK founder Eikichi Kawasaki left the company to form Playmore, and when SNK slipped into bankruptcy that October, Kawasaki would purchase much of his former firm's intellectual rights and tempt back many of the developers who had since jumped ship. Thus SNK Playmore was formed, and the Neo-Geo brand was revived once more.

Part of SNK Playmore's strategy during this period was to ensure a steady stream of ports to other systems. It made sense as the consoles of the period – the PlayStation 2, Xbox and later Wii – were all capable of hosting faithful replications of the big games, and it allowed fans who couldn't afford the AES hardware the chance to enjoy SNK's library at a lower cost. In Europe, these titles were published by Ignition Entertainment. Former Ignition employee Jim Philpot recalls that SNK Playmore was quite stringent when it came to quality, although some ports, particularly the PS2 compilations, were far from perfect. "We had to use the original Neo-Geo code – we weren't allowed to re-code the games so essentially every release was a Neo-Geo emulator. All we ever got as our starting point was the Neo-Geo assembler code. Sound effects and artwork were ripped directly from this data. It's the only option we had, but it did mean the games were perfect replicas. It's not well known that it was the work of one programmer – one of the best I've ever worked with then, or since, Ade Scotney. Ade has worked ▶

» Here's another view of the memory card. It's an incredibly slim piece of equipment and it's quite delicate.



SOUND CHIP
■ Responsible for all of the lovely audio you hear in your Neo-Geo games, the Yamaha YM2610 offers 15 channels of sound, with seven of those reserved exclusively for sound effects.

MEMORY CARD SLOT
■ The Neo-Geo was the first console to use removable memory cards for save game data. The card slots into this port on the front of the machine and it can also be used with MVS cabinets.

THE COPROCESSOR
■ Clocked at 4 Mhz and working in tandem with the main Motorola CPU, this chip is also used for controlling audio.

Blazing a trail

How SNK set a trend with its Memory Card

Modern machines may have done away with the archaic concept of memory cards thanks to their roomy internal hard drives, but when CD systems first arrived in the Nineties such items became utterly essential for saving in-game progress. However, despite what you may assume they didn't actually originate with the likes of Sony's PlayStation and Sega's Saturn – SNK beat both to the punch by almost half a decade. The memory card which shipped alongside the Neo-Geo had a slightly different aim to the one which would become such an intrinsic part of our lives when the PlayStation arrived – it was designed to allow arcade players to carry over their progress on the home console, and vice versa. It could hold a whopping two kilobytes of data. A built-in lithium battery keeps the data alive, but replacing it is tricky.



Ten Great Games

(That weren't beat-'em-ups)

LAST RESORT 1992

■ An early shooter release for SNK, but arguably one of its finest. The gameplay may not offer anything particularly original but it's addictive and compelling, helped in no small part by the unique visuals which possess a grim and foreboding atmosphere. One of the more underappreciated gems in the Neo-Geo library, *Last Resort* is well worth a look for shooter fans.

PUZZLE BOBBLE 1994

■ A spin-off of Taito's famous *Bubble Bobble* franchise was renamed *Bust-A-Move* in some regions and went on to become a considerable hit on consoles like the PlayStation and Saturn. The match three bubble-popping gameplay means instant playability, and the concept has been cloned many times over the past few decades. A 1999 Neo-Geo sequel is also available.

PULSTAR 1995

■ The Neo-Geo never got a port of *R-Type*, but then it didn't really need one as Aicom's 1995 shooter *Pulstar* does a pretty fine impression of Irem's seminal arcade classic. Pre-rendered sprites give the whole experience a very clean and shiny appearance, while the intense and challenging gameplay make this a real test for fans of the shoot-'em-up genre.

TWINKLE STAR SPRITES 1996

■ One of the most unique titles on the Neo-Geo, this puzzle/shooter hybrid is also one of the system's premier two-player experiences. The screen is divided in two with each player taking a side, and shooting down waves of enemies allows you to plant them on your rival's screen – the last player standing is the winner.

NEO TURF MASTERS 1996

■ Proof that the Neo-Geo was capable of handling effective sports simulations, *Neo Turf Masters* is an arcade experience which offers short-burst challenges rather than a lengthy career, but is all the better for it. Golf is often derided as being a pedestrian sport, but Nazca's take is fast-paced and thrilling, making this one of the jewels in the Neo-Geo's crown.







» The controllers were excellent, feeling like proper arcade sticks. They were obviously expensive, too.

in the industry from the very beginning and has quite an impressive back catalogue, but he's always preferred a low profile. Without him the games would never have made it to console – it's as simple as that." Ignition quickly found that these ports became a key revenue stream. "It's likely that had we not have had those titles, Ignition wouldn't have lasted as long as it did," says Jim. "It was the SNK games that provided the revenue that kept the development side fuelled. SNK were very hands-off in the end. We had such a smooth operation going that all they used to do in the end was send us source code and then start phoning up chasing royalties!"

While Ignition's ports found a largely receptive audience, dedicated fans remain adamant that the only authentic way to experience the Neo-Geo library is on the original hardware. As is the case with any classic system, the Neo-Geo and its software are in constant demand in today's second-hand market, but seeking out SNK's platform requires a level of financial dedication that is arguably unmatched in the realm of videogaming. "In the world of Neo-Geo AES collecting, most of the older games are the cheapest while newer games being more expensive, roughly speaking," explains Jonathan. "Although that's not always the case, you'll find that many of the launch window titles can be picked up for less than £100 – however, move along a few years and you'll quickly find games shooting up over the £200 price point. Some of the later entries, such as the amazing *Garou: Mark Of The Wolves* will easily set you back between £500 to £800 and most people are aware of *Metal Slug*'s ridiculous £1,000+ going rate. If you're tight on budget but just want to play, the Neo-Geo CD system is a good choice as the prices are reasonable, just be aware that not all the games made it to CD format and some of the loading times are really bad. Finally, if you're really not too fussed about the presentation of the packaging, get yourself either a Supergun or a cheap arcade cabinet and an MVS system; MVS games are cheap as chips. *Metal Slug* can be found for about £25, for example." While Jonathan is a cautious advocate of the AES route, Jeremy feels that anyone looking to begin a Neo-Geo collection

Did You Know?

■ The system's launch price in the US was $649 (two controllers, one game) for the Gold System and $399 for the Silver (one controller, no game).



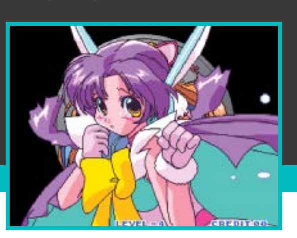
NEO BOMBERMAN 1997

One of only two games released by Hudson Soft on the Neo-Geo – the other being puzzle game *Panic Bomber*. *Neo Bomberman* is, as you would expect, a fairly traditional take on the established *Bomberman* concept. It benefits from excellent visuals and sound, but lacks an AES edition – if you're interested then you'll have to pick it up on an MVS cart.



MONEY IDOL EXCHANGER 1997

A puzzle title where you match together coins to clear an ever-falling flood of currency, *Money Idol Exchanger* is one of those games which is easy to pick up but difficult to put down. Aided by some incredibly cute visuals, it's another often overlooked classic in the Neo-Geo library. Sadly, no AES version exists.



SHOCK TROOPERS 1997

Saurus' take on the tried-and-tested *Commando* template is a graphical tour de force packed with explosions, gunfire and it is absolutely packed with character. Massive sprites, varied environments and an excellent two-player mode all combine to make this feel like a top-down *Metal Slug*, and it's one title that should be high on everyone's list.



BLAZING STAR 1998

The sequel to the equally excellent Neo-Geo shoot-'em-up *Pulstar*, *Blazing Star* boasts a combination of pre-rendered and hand-drawn sprites, and uses the host hardware's scaling capabilities very effectively indeed. Weighing in at a considerable 348 megabits, this is one of the system's most beloved blasters, and with good reason.



METAL SLUG X 1999

Essentially a remix of 1998's *Metal Slug 2*, *Metal Slug X* is considered by some fans of the run-and-gun series to be the best offering. One of the franchises which arguably defines the Neo-Geo format, *Metal Slug*'s appeal remains undiminished even after all these years thanks to its fusion of tight gameplay, amazing visuals and over-the-top carnage. Essential.





» The Neo-Geo catered to two-player gaming with two available ports on the system's front.

> **"Developing for Neo-Geo is kind of like working on a classic car"**
> Timm Hellwig

should totally ignore the home variant and instead opt for the arcade MVS format. "Home cartridge games are way too expensive," he says. "You will spend more money on a MVS setup opposed to an AES setup initially, but it will pay for itself when you save thousands of pounds on games."

The Neo-Geo's status as one of the most desireable gaming systems of all time has ensured continued developer interest right up to the present day, making it one of the longest-supported domestic console formats, although the number of active developers is predictably tiny. One of the most notable is German studio NG:DEV.TEAM, which has been responsible for recent MVS titles such as *Last Hope* (2006), *Fast Striker* (2010), *Gunlord* (2012) and the forthcoming *Kraut Hunter* (2016). NG:DEV.TEAM founder Timm Hellwig explains that the active and enthusiastic community which has grown up around the system means that his company can continue to produce new software. "The support of the community is great, and we still have a lot of fun developing games for it," he says. NG:DEV.TEAM's expertise in coding for SNK's system means Timm is ideally placed to comment on the task of creating software for a console whose technical zenith was almost three decades ago. "It's very hard sometimes as every little thing can become a challenge," he explains. "In some aspects it's easier though, as we not only have full control over everything, we also know every bit of the system. With newer game systems everything is abstracted; developers neither have access to it nor do they know what is going on under the hood of the machine. Developing for Neo-Geo is kind of like working on a classic car."

NG:DEV.TEAM goes the whole distance when it comes to making new Neo-Geo games, not only manufacturing MVS carts but also creating unique AES editions – complete with case, inlay and manual – for home collectors. The prices are eye-watering, with AES versions costing around £390. You might assume that it would be financially impossible to keep this kind of software support going, but that isn't the case. "There's enough demand to build a successful business from it," states Timm. "We have slow but steady growth in the market. The high cartridge prices help to make this possible. At significantly lower prices, the business model would not work."

New software is just one way in which the Neo-Geo brand is being kept alive. Christopher Taber's Analogue Interactive is using lavish hardware to maintain the gaming public's interest in SNK's aging system, and has to date produced a trio of super-exclusive systems which push the already desirable brand into new levels of luxury. The first wooden Consolized MVS was followed by the CMVS Slim, and both machines are encased in solid ▶



» Although some games are insanely expensive, it's possible to get plenty of decent titles at reasonable prices.



» Many Neo-Geo owners prefer to get their hands on earlier machines, as the output is better on them.

Non-Ported Exclusives

Five fantastic NEO-GEO games that never reached other systems

CYBER-LIP 1990



■ Despite the odd name and rough visuals this remains a classic and it is said that some of its developers would go on to work on *Metal Slug*. Borrowing concepts from Konami's famous *Contra* franchise, *Cyber-Lip* is packed with action and is still pleasantly challenging.

ZED BLADE 1994



■ Also known as *Operation Ragnarok*, *Zed Blade* is a shooter which has largely been forgotten by the SNK faithful. It's not in the same league as *Blazing Star* or *Viewpoint*, but its status as a true Neo-Geo exclusive makes it worth a closer look. The visuals are also eye-catching, especially for 1994.

WINDJAMMERS 1994



■ Another solid Neo-Geo classic, *Windjammers* is a sports title where the object is to hurl a disc into your opponent's goal. Crazy power-up moves and trick shots make this souped-up take on *Pong* compelling when two players are involved, and its reputation ensures it is in constant demand.

NEO DRIFT OUT: NEW TECHNOLOGY 1996



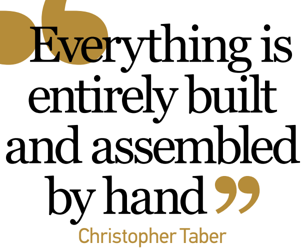
■ The Neo-Geo hardware couldn't handle 3D visuals so driving games usually adopted a fixed perspective – like this rally title from Visco. Fluid controls and short courses make this the ideal pick-up-and-play racer, and it's surprising how authentic the rallying experience feels.

NIGHTMARE IN THE DARK 2000



■ Playing a lot like Taito's *Bubble Bobble* and *Don Doko Don*, *Nightmare In The Dark* boasts the kind of visuals you'd expect to see Tim Burton come up with, and also showcases a superb soundtrack. Exclusive to the console, AM Factory's excellent title has sadly been ignored by a great many gamers.

wood. More recently Taber's company has produced the Analogue NEO, which is a CMVS combined with two joysticks all in one piece of wood for the ultimate arcade experience. All of Christopher's machines come with RGB, component, S-Video and composite output, ensuring that they work on practically any television set you could choose to hook them up to. This is the very upper tier of Neo-Geo collecting. "Every single Analogue CMVS is entirely hand-crafted," Christopher explains. "Every piece of wood is hand selected by our woodworker and we only use the most beautiful pieces of each board foot – the ones with the most stunning grain patterns. Everything is entirely built and assembled by hand in the USA. Our Neo-Geo products are very special to us and that is the only way we will ever build them."



> "Everything is entirely built and assembled by hand"
> Christopher Taber

Ironically, Christopher says that the impetus to produce these incredibly expensive systems was borne out of the fact that collecting for the AES format was so prohibitive. "Being able to explore the Neo-Geo library with an AES is unreasonably expensive," he says. "With MVS, not only are the games much easier to find, they are a fraction of the cost. Out of all the Neo-Geo platforms, the MVS library represents the most complete, too. MVS is pretty much unanimously regarded as the best way to play Neo-Geo. Problem is, you either have to play with an arcade cabinet or rig up your own DIY Supergun system to play MVS without a cab – which is unreasonable for most people." To overcome this, Christopher took the guts of the MVS system and placed them inside a console-like shell, as well as adding a whole range of outputs. The result is easily one of the most desirable Neo-Geo systems currently available, yet it offers access to the cheaper world of MVS collecting.

In 2012 it appeared that SNK Playmore was getting ready to give its famous system a new lease of life. By far the most audacious attempt to revive the brand, the handheld Neo-Geo X was billed as the second coming of the Neo-Geo line. Manufactured by US firm Tommo with SNK Playmore's blessing, the system is designed to slot into a docking station shaped just like the original AES console, and even comes with a joystick which is based on that one which shipped with the famous machine. What should have been a glorious resurrection of the brand has ended in a bitter legal battle, as SNK Playmore has ordered Tommo to remove stock from shelves and cease production. At the time of writing the Neo-Geo X is still widely available. "Neo-Geo X is still fine to sell," says FunStock general manager Andy Pearson, the main retailer of the console in the UK. "We continue to sell it on a regular basis and all of the new consoles ship with the latest firmware, which resolved a lot of the issues." This confusion has only served to muddle what could have been a genuine revival of the legendary brand.

The Neo-Geo X furore is perhaps indicative of the kind of company that SNK Playmore has become – but the story continues to twist and turn. In August 2015 SNK Playmore was purchased by Chinese investors with the intention of using the company's vast library of IP to create a media empire which will cover games, anime, movies and much more besides. Time will tell if this grand vision can be pulled off, but it's highly unlikely we'll witness another console as unique as the Neo-Geo. "Releasing a console which is purely for gaming for a hardcore fanbase is going to be an exceptionally rare thing," says James. "I think the closest thing to that right now

Did You Know?

■ 2004's *Samurai Shodown V Special* is the last official game for the system published by SNK. It shipped on a 708 megabit cartridge.



» As with many consoles of the time, the Neo-Geo AES sports a reset button.

Collector interview

Vinnie Stokes of Facebook's G.G.G. shares his love for SNK's console



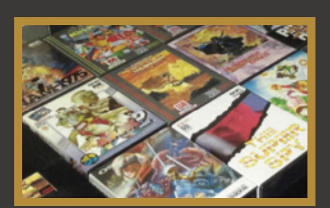
What drew you to collecting for the Neo-Geo AES?
I always wanted a Neo-Geo as a teenager, but I could have never afforded one back then. Neo-Geo (in the arcade) always had the edge as a teen… I loved *Super Sidekicks*.

How complete is your collection, is there anything you're still after?
My AES collection isn't that big, around 15 games. I also have the Neo-Geo pocket, Colour (with games), CD, Neo-Geo X and a full-size arcade cabinet, the cabinet has a 150-in-one cart.

Why do you think the machine remains so collectible?
The Neo-Geo for many collectors is the ultimate Nineties arcade experience, only true gamer/collectors appreciate them to justify the expense of collecting them.

Do you think the games are worth the money they go for?
Everything has a price I guess, but yeah, they are worth it. If you want arcade quality then there is no competition.

Do you have a Neo-Geo CD? How does it compare?
I do have a Neo-Geo CD, but I've never played it. Can't beat blowing a cart in my opinion.



What ten games would you recommend to those on a budget?
There are lots of £30-£50 games you can pick up, mainly fighting ones, to be honest. *Sidekicks* is a must-have for footy fans though.

Do you feel the Neo-Geo X is a good compromise for those that can't afford the real deal and just want to experience the games?
The Neo-Geo X is another I just had to have in my collection but it's still sealed in its box, never played. So my answer to that is, nothing compares to firmly pushing that big old cart into the slot and flicking the switch.



Did You Know?

■ The Neo-Geo's colour palette was 65,536 colours, and it could display 4096 colours on-screen at any time.

Neo-Geo: The Alternatives

If you're not willing to drop hundreds of pounds to buy your way into the Neo-Geo club, don't despair – many of its most games made the journey to more affordable platforms

1 METAL SLUG ANTHOLOGY PSP

PRICE: PSP: £15
Neo-Geo £4500
PROS: Six Neo-Geo games, bonus art and a developer interview.
CONS: Lengthy loading times.
★★★★☆

2 METAL SLUG 3 XBOX

PRICE: Xbox: £4
Neo-Geo £500
PROS: Offers two bonus scenario games.
CONS: Continues send you back to the start of the stage.
★★★★☆

3 SNK ARCADE CLASSICS VOL. 1 PSP

PRICE: PSP: £10
Neo-Geo £4300
PROS: 16 Neo-Geo games, a great spread of genres.
CONS: Long loading times, a little slowdown. ★★★★☆

4 THE KING OF FIGHTERS '97 SATURN

PRICE: Saturn £10
Neo-Geo £70
PROS: Faithful port, with an great soundtrack.
CONS: Long loading times, slightly muffled sound effects and speech. ★★★★☆

5 SNK VS CAPCOM: SVC CHAOS XBOX

PRICE: Xbox: £5
Neo-Geo £220
PROS: High resolution HUD, online play (now closed).
CONS: Few extras. ★★★★☆

6 METAL SLUG X PLAYSTATION

PRICE: PlayStation: £12
Neo-Geo £700
PROS: Faithful gameplay, plus an added Combat School challenge mode.
CONS: Cut-down animation, long loading times and poor sound effects. ★★★☆☆

7 THE KING OF FIGHTERS COLLECTION: THE OROCHI SAGA PS2

PRICE: PS2: £10
Neo-Geo £330
PROS: Five games, with unlockable music/art galleries.
CONS: Slight screen stretching, occasional audio bugs. ★★★☆☆

8 GAROU: MARK OF THE WOLVES DREAMCAST

PRICE: Dreamcast: £18
Neo-Geo £475
PROS: Unlockable gallery, arranged soundtrack.
CONS: Replaced voice effects, some slowdown issues.
★★★☆☆

9 TWINKLE STAR SPRITES DREAMCAST

PRICE: Dreamcast: £40
Neo-Geo £225
PROS: Arranged soundtrack, option to remove slowdown.
CONS: Missing many extras from prior Saturn version.
★★★★☆

10 NEO-GEO X

PRICE: Neo Geo X: £120
Neo-Geo £3000
PROS: Replica console with joystick, HDMI output, 20 built-in games plus the option to buy more, and a handheld unit!
CONS: Relatively expensive, new game releases discontinued, handheld's screen is sub-par. ★★★★☆

Special thanks to The National Videogame Arcade and Vinnie Stokes for supplying their Neo-Geo consoles for the photography in this issue. Check out Vinnie's Facebook page Game Gear Group for more information.



> "A lot of things made the Neo-Geo irresistibly exclusive"
> James Mielke

would be the PlayStation Vita, which seems to be a bastion of hardcore games coming out of Japan, but it's still not quite the same. The Neo-Geo was a console borne out of an arcade legacy, and with arcades what they are – or aren't – today, I have serious doubts there will ever be another like it."

Jeremy is in agreement. "A lot of things made the Neo-Geo irresistibly exclusive," he summarises. "Mainly the price of the console, the price of games, and the inability for youngsters to obtain it. It brought the arcade experience home, which isn't an issue anymore. These days the arcade experience is at home – you can't go out to an arcade like you use to, and come home to your vastly-underpowered NES longing for more."

SNK broke exciting new ground with the release of its Neo-Geo system, but its obscenely high price point and obsession with fighting games arguably stopped it from being the universal success that the company craved so greatly. We're eternally grateful that SNK did shoot for the stars however, because it delivered a unique console that remains as exciting and desirable today as it did on its original release. *


THE Bluffer's guide TO



» [Arcade] Taito's iconic *Space Invaders* kickstarted the arcade shoot-'em-up craze…

FROM SPACEWAR TO RESOGUN, THE 2D SHOOT-'EM-UP HAS EVOLVED AND ENDURED FOR OVER FIFTY THREE YEARS. MIKE BEVAN EXAMINES WHY SOME OF US STILL CAN'T GET ENOUGH FRANTIC SPACESHIP-ON-ALIEN ACTION…

It started with a heartbeat thump. Rows of pixellated aliens shifting slowly down arcade monitors across the globe. Landing first in Japan, replacing the familiar Pachinko parlours with their unearthly glow, their influence spread. Soon shoot-'em-ups were everywhere. In fact, we'd be surprised if the humble shoot-'em-up (or shmup) wasn't the most numerous videogame type of all time, as well as one of the oldest. And while *Space Invaders* popularised the genre in the arcades, leading to a slew of Earth-vs-extra-terrestrial themed coin-ops and clones, the origins of the 2D shooting game genre go back even further.

"As a kid growing up in Silicon Valley, I had a chance to see some pretty cool stuff," recalls Eugene Jarvis, celebrated designer of *Defender* and *Robotron*. "The first shoot-'em-up I saw was the *Galaxy Game*, a coin-op rendition of the pioneering videogame *Spacewar* back in 1971 at Stanford. It was mobbed with players at ten cents a game… Even though *Spacewar* was created in 1962, nobody had seen it outside of computer research labs. Unfortunately the *Galaxy Game* proved too expensive and unreliable to commercialise but it showed the appeal of the classic shoot-'em-up."

Created by group of MIT students led by programmer Steve Russell, *Spacewar*'s concept was simple. Two spaceships, each controlled by a player, attempted to shoot each other while countering the gravitational effects of a star in the centre of the screen. The game used a system later made famous in the arcade hit, *Asteroids*, with rotational controls, a forward thrust toggle and a 'hyperspace' key for getting you out of sticky situations. The game would motivate Eugene's inclusion of momentum and other physics in *Defender*, along with Atari coin-ops such as the aforementioned *Asteroids*, as well as *Gravitar*. ▶



KNOW YOUR SHOOT-'EM-UP GAMES

SHMUP
■ A popular term for a traditional 2D shoot-'em-up popularly used by UK Commodore 64 review magazine *Zzap!64*, and it is now used by fans worldwide.

FIXED-SCREEN SHOOT-'EM-UP
■ Shoot-'em-ups that take place on a single screen without any scrolling. Most early shooters, such as *Space Invaders* and *Galaxian* were of this type.

SCROLLING SHOOT-'EM-UP
■ Advanced shmups use scrolling to give the feeling of travelling across a large game world, be it vertically, horizontally, or multi-directionally.

TWIN-STICK SHOOTER
■ Games where the player can aim and shoot using a second joystick. Pioneered by games like *Robotron*, this genre has become popular on modern consoles.

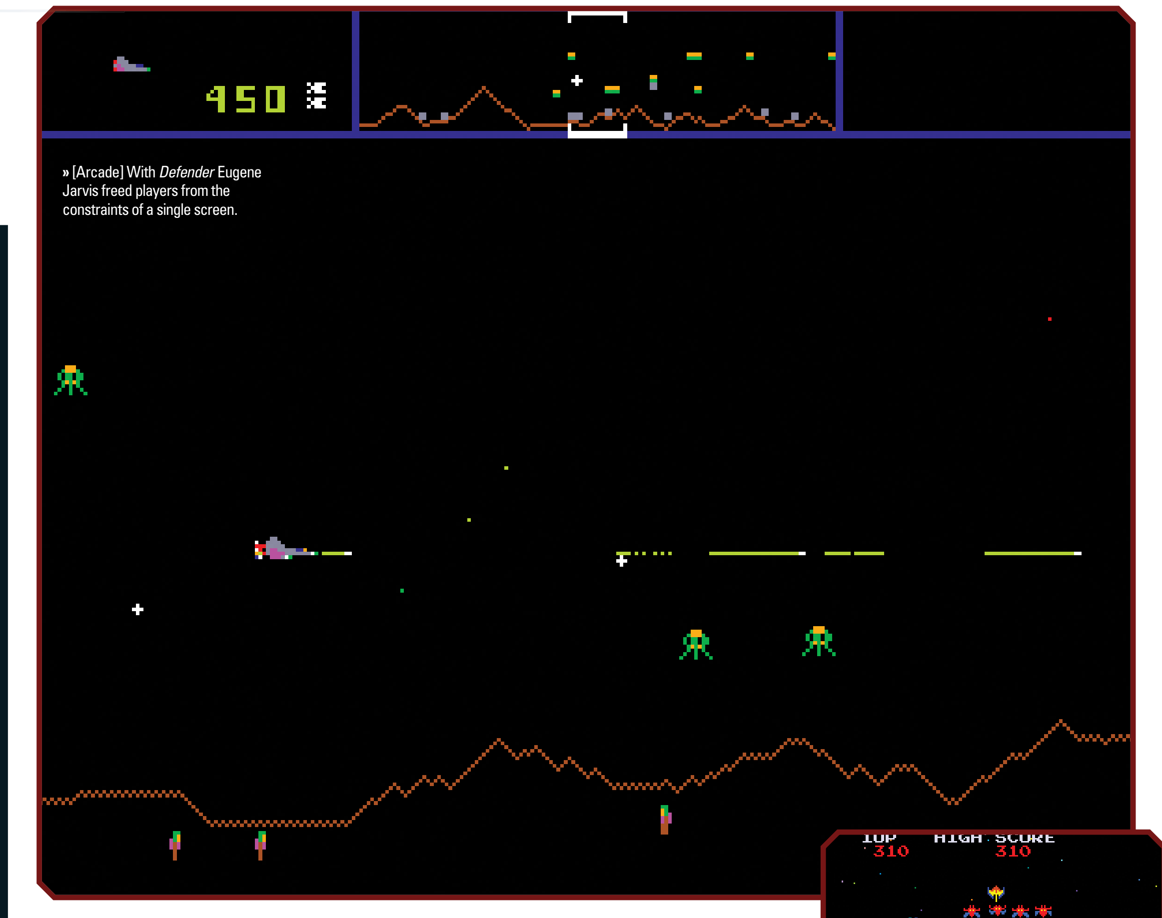
RUN-AND-GUN
■ A sub-genre of shooter usually involving a character moving on foot and shooting at enemies. Examples include *Commando* and *Outzone*.

POWER-UP
■ A mainstay feature of modern shmups, the power-up is usually a collectable that increases the player's firepower or adds specific new weapon types.

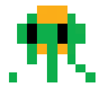
BULLET-HELL SHOOTER
■ A variant of shooting games, typified by the work of Japanese companies such as Cave, where curtains of enemy bullets make survival literally hellish.

MULTIPLIER
■ A feature seen in bullet-hell games like *DoDonPachi* where killing lots of enemies quickly in a short space of time creates massive scoring opportunities.

TIME-ATTACK
■ A game mode present in some shmups where players have to score as many points as possible against the clock to top the leaderboard.

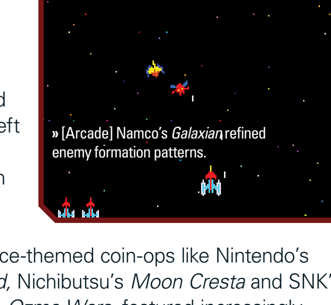


» [Arcade] With *Defender* Eugene Jarvis freed players from the constraints of a single screen.



▶ But it was *Space Invaders*' simple concept of a lone craft spewing projectiles at a formation of descending targets that became the template for the first wave of shoot-'em-ups. Along with *Space Invaders* manufacturer, Taito, many well-known arcade producers got early starts in the shooter gold rush of the late Seventies and early Eighties. Data East's *Astro Fighter* presented rigid formations of enemy ships attacking the player, it also applied a scrolling starfield and a palette of 16 colours, as opposed to *Space Invaders*' monochrome visuals. Better still was Namco's *Galaxian*, which doubled the amount of onscreen colours and featured enemies that would break from their formation and dive bomb towards the player's ship.

"I was scared of *Space Invaders* machines," chuckles Malcolm 'Malc' Laurie, creator of the shooter website shmups.com. "I didn't know what they were all about, and all the big boys were usually at them. Along came *Galaxian* and I shoved my way to the front and inserted my coin, then I was hooked. These colourful enemies actually swooped and attacked, and it just made perfect sense. How simple can you get? Shoot the baddies before they shoot you. Left, right, fire. It was all about your tight reactions and split-second decisions, and every time I left the machine I felt a real rush and wanted more action."



» [Arcade] Namco's *Galaxian* refined enemy formation patterns.

Similar space-themed coin-ops like Nintendo's *Space Firebird,* Nichibutsu's *Moon Cresta* and SNK's arcade debut, *Ozma Wars*, featured increasingly complex attack patterns, pre-empting those seen in later, more sophisticated shooting games. With enemies following unpredictable curving trajectories, these titles were more varied and challenging, taking players by surprise when a cunning alien swung back on them from off of the screen. Perhaps the best example of this first batch of swirly attack-wave shooters was Namco's *Galaga.* Alongside *Moon Cresta,* which gave players the chance to dock

SELECTED TIMELINE

1962 – SPACEWAR
■ This two-player game for the PDP-1 is arguably the earliest example of the genre.

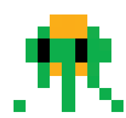
1978 – SPACE INVADERS
■ The granddaddy of the traditional shoot-'em-up, *Space Invaders* introduced many gamers to blasting aliens.

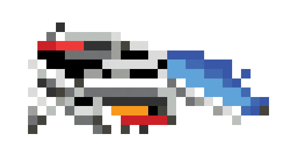
1980 – PHOENIX
■ Featuring birds in space, *Phoenix* brought us one of the earliest videogame bosses with its mothership.

1981 – DEFENDER
■ A genre-changing shoot-'em-up, *Defender* allowed players to fly in two directions across a scrolling landscape whilst blasting aliens.

1982 – ROBOTRON: 2084
■ Eugene Jarvis pioneered the twin-stick shooter with this robot blaster.

1982 – XEVIOUS
■ This shmup pioneered ground and air-based enemy formations.





FIVE ESSENTIAL GAMES

Our pick of some of the greatest and most influential shoot-'em-ups ever devised.



GRADIUS

■ 1985 ■ Arcade, Various

This Konami shooter enabled players to build up their ship's arsenal using a weapon select bar at the bottom of the screen. Piloting a tooled up ship with missiles, lasers and the iconic 'multiples' gave you a warm glow of destructive enjoyment, a feeling recaptured in its spin-off, *Salamander*, as well as its sequels.



R-TYPE

■ 1987 ■ Arcade, Various

The start of another flagship shooter franchise, *R-Type*'s H.R. Giger-inspired visuals and unique detachable Force Orb power-up went on to influence scores of later horizontal-scrolling shmups. Its bio-organic enemies and bosses were exquisitely realised, plus who could forget their first encounter with the enormous green Bydo mothership on stage three?



AXELAY

■ 1992 ■ SNES

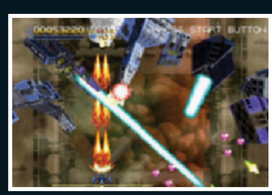
With some of the best visuals seen in a console shmup, as well as one of the meanest looking hero spaceships, *Axelay* took the vertical and horizontal scrolling structure of *Salamander* and ran with it to create a SNES classic. It's power up and weapon system was sublime, and its enormous bosses rivalled anything seen in the arcades at the time.



DODONPACHI

■ 1997 ■ Arcade, Saturn, PSOne

The game that truly defined the modern bullet-hell shmup, *DoDonPachi* improved the combo multiplier system of it predecessor, *DonPachi*, to create an epic score-oriented shooter. Inspiring a long-running franchise from manufacturer Cave, it influenced most future manic-score releases and remains one of the most revered titles in their back catalogue.



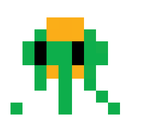
RADIANT SILVERGUN

■ 1998 ■ Arcade, Saturn, Xbox 360

Starting out as an arcade game before making it onto the Sega Saturn, Treasure's magnificent shooter was inspired by Irem's *Image Fight*, bringing next-gen visuals and stunning 3D effects into the mix. With its colour-based score-chaining mechanic, complex weapon-system and many secrets, it's a timeless, endlessly revisitable game.

ships together and increase their firepower, *Galaga* introduced one of the earliest examples of a 'power-up'. A alien could capture your craft in a tractor beam and take it to the top of the screen, but if you had another life it was possible to free it, link up two spaceships and double your onscreen munitions.



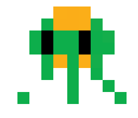


Centuri's *Pheonix* and Midway's *Gorf* were notable for including the earliest examples of shoot-'em-up 'bosses' in the form of huge motherships, along with distinctly different stages (in *Gorf*'s case including direct clones of *Space Invaders* and *Galaxian*). But while most of the early games took place on a fixed screen, often with a pretty moving starry backdrop, a few arcade titles started to introduce playfields that scrolled upwards or sideways, or even both. One of the first was the hugely influential and revered *Defender*, which was a massive leap in visual, technical and gameplay terms from *Space Invaders* which arrived just two years earlier. "I wanted to do a game that broke new ground," says its creator, Eugene Jarvis. "I love the emotional aspect of gaming, challenging the player's instincts in an intuitive way. So the expanded universe of multiple scrolling screens provided both

> "I was scared of Space Invaders machines, I didn't know what they were all about"
>
> Malcolm Laurie

depth of gameplay and it was a real adrenaline rush to fly around the planet at insane speeds!

"It added a real physical twitch factor, challenging motor skills with flight path navigation and simultaneous aiming and shooting, and at the same time, it added tactics and strategy in rescuing and protecting the astronauts on the ground from the enemy assault. It was originally just a unidirectional scroller with a wrap-around world, but after playing it a bit it was a real bummer to have to fly around the entire world to go back and get something you missed, so we kicked the reverse button in, and the playability increased exponentially." Another feature that *Defender* popularised was the screen clearing 'Smart Bomb.' "There was a big deal about new smart military weapons coming online back in the late Seventies," says Eugene. "I tried implementing a true Smart Bomb that would surgically remove the most threatening enemy. Problem was, it wasn't ▶





» [Arcade] *Phoenix* brought us this… one of the first ever videogame bosses.

1983 — GYRUSS
■ A timeless shooter from Konami with a pounding soundtrack that was based on Bach.

1984 — DROPZONE
■ Released for Atari 8-bit and C64 computers, Archer Maclean's glorious take on *Defender* was one of the best home shooters of its time.

1985

1986 — SIDE ARMS
■ Capcom's excellent scrolling shmup allowed players to shoot left or right using separate fire buttons.

1986 — URIDIUM
■ Like *Dropzone*, this C64 release was one of the first home shooters to mirror the action of arcade games.

1987 — WIZBALL
■ Inspired by *Gradius*, this scrolling shooter was an early title from Sensible Software.

1987 — FLYING SHARK
■ One of Toaplan's most popular early games, *Flying Shark* was a vertically scrolling biplane-themed shooter that made it to many home platforms.

1988

1989 — XMULTIPLY
■ This continued Irem's experimental approach to weapon systems by giving players a ship with squid-like tentacles.



» [Arcade] The tricky solar assault stage in *Salamander*.

much fun, and was a lot of work to program. I discovered it was way cooler just to blow everything up, so really the Smart Bomb isn't all that smart!"

Alongside *Defender*, other games that introduced scrolling included Namco's *Xevious*, a vertical shoot-'em-up that laid down a benchmark for future games of its type, Konami's *Scramble*, Sega's *Zaxxon* and SNK's multi-directional *Vanguard*. "I could never play *Defender*," admits veteran games designer Ste Pickford. "There was always a crowd about three people deep surrounding the machine at Stockport arcade, so you had to jostle and wait, and get your 10p down on the machine half an hour in advance, just to get a go. When I did, the number of buttons was so confusing, and the game was so fast, that I just died in about ten seconds flat. So, instead, I'd stand at the back of the crowd and watch the local experts play, marvelling at the way their fingers flashed across the buttons like 100-word-a-minute typists. I much preferred the side-scrolling games with solid floors and ceilings, like *Scramble*, then *Gradius*, and especially *R-Type*. The thing about *R-Type* was that it just felt like the perfect video game when it came out. It played brilliantly, looked amazing, and refined Konami's power-up system. Each level was a new jaw-dropping surprise, and the bosses were just incredible."



» [Arcade] *Xevious* introduced scrolling backgrounds with ground and aerial targets along with bosses.

"Jeff Minter's games got me into writing games to start with - I might never have got into writing games"

Andrew Braybrook

Konami's influence on the shoot-'em-up scene was substantial, with the introduction of *Gradius* and *Salamander* alongside its now-familiar weapon-power up sidebars, and quirky but brilliant titles like *Time Pilot*, *Gyruss* and the *Defender*-esque *Juno First*. Other companies that made an impact included Capcom with its *1942* fighter-plane shooting series, Taito with its aquatic-themed *Darius*, and Nichibutsu with *Terra Cresta* and its spinoffs. "I adored *UFO Robo Dangar*," says Malc. "The way you could start with a small ship, and bolt more weapons and parts on, ending up with a massive robot… And that music, driving me on… That style of shooter of course started with *Terra Cresta*. And spotting a shiny new three-screen *Darius*, and spending a whole afternoon lost in its clutches..." New Japanese publishers were emerging that dedicated themselves almost exclusively to designing arcade shoot-'em-ups such as Irem (*R-Type*, *XMultiply*) and Toaplan (*Slap Fight*, *Flying Shark*). Something of a shooter renaissance was happening in the coin-op scene, and also on home computers of the time.





Andrew Braybrook, coder of the C64 shooter *Uridium* remembers his introduction to console shmups. "I bought an Atari 600XL just to play *Dropzone*, partly for the speed of the game and also the presentation," he recalls. "Jeff Minter's games got me into writing games to start with – if I'd never seen *Attack Of The Mutant Camels* and *Matrix* I might never have got into writing games because I'd not have seen what was possible." In fact it would be impossible to write a feature about shmups without mentioning Jeff. He's been creating stunning shoot-'em-ups at Llamasoft for over 30 years, delivering all sorts of weird brilliance along the way. His knack of taking existing ideas and adding his own quirks to them has one him a deserved legion of fans that adore the Wales-based developer. We'd hate to live in a world without *Attack Of The Mutant Camels* and *TxK*, just as we need *Uridium* in our lives.

"I had played *Defender* and *Space Invaders* but *Uridium* was something else," recalls graphic



» [Arcade] Games like *Tempest* and *Gyruss* (above) gave the impression of shooting into 3D space.



» [Arcade] Konami's *Time Pilot* let players travel in any direction through fluffy parallax clouds.

1990

RAIDEN

■ An excellent vertical shooter that gave rise to a shooter franchise from manufacturer Seibu Kaihatsu culminating in the excellent *Raiden Fighters* games.

THUNDER FORCE III

■ Often considered the best entry in Techno Soft's Sega Mega Drive shooter series, this game also made it into the arcade in the form of *Thunder Force AC*.

1991

XEXEX

■ A graphically stunning Konami arcade shooter that integrated elements of the Gradius series with a Force-style weapon system similar to *R-Type*'s.

1992

1993

BATSUGUN

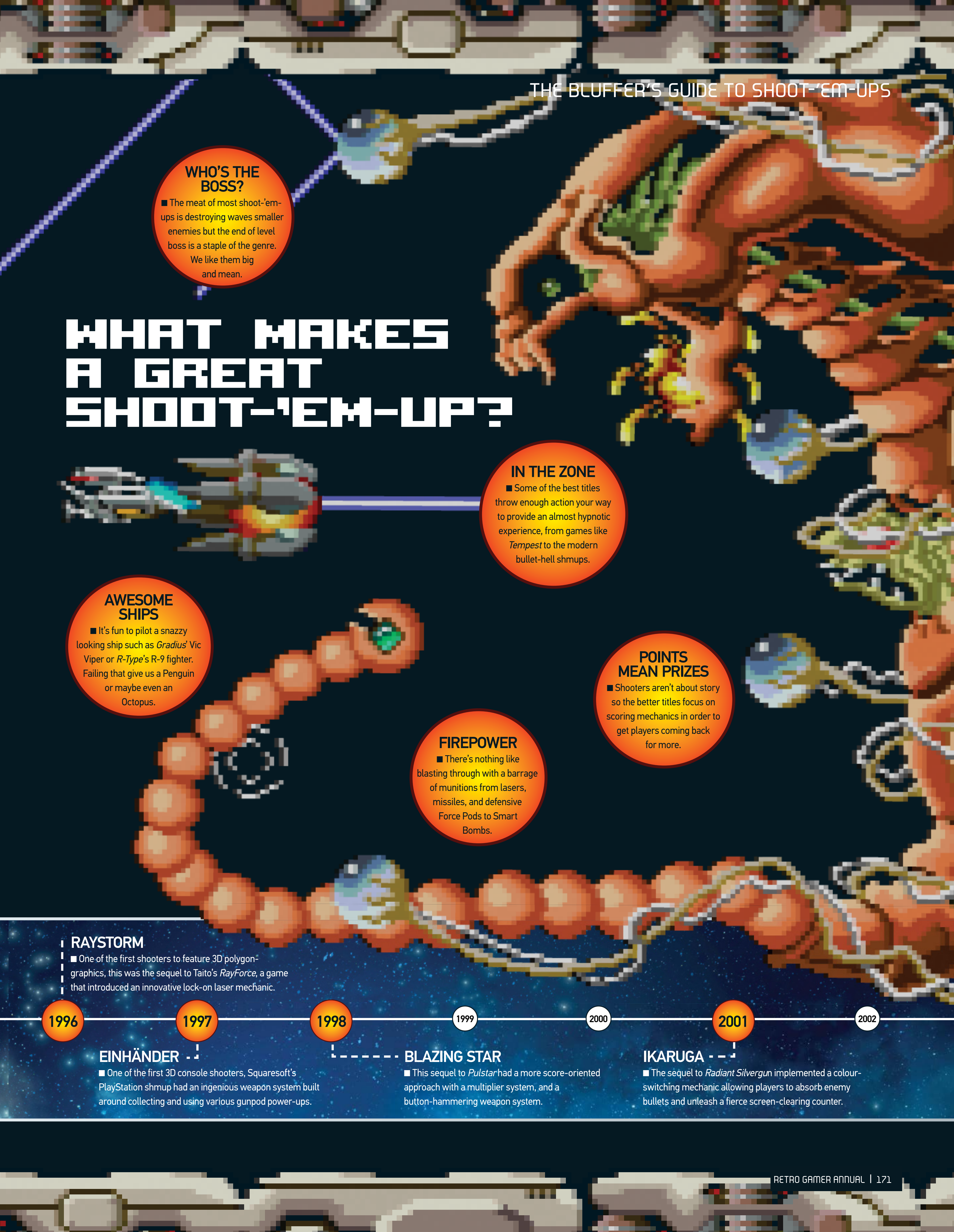
■ Toaplan's final shoot-'em-up give birth to the 'manic' or bullet-hell genre, integrating complex enemy waves and bullet patterns and a smaller player hitbox.

1994

1995

PULSTAR

■ This Neo Geo shooter appeared to be much-inspired by *R-Type*, but featured even better looking graphics and similarly rock-hard gameplay.



WHAT MAKES A GREAT SHOOT-'EM-UP?

WHO'S THE BOSS?
■ The meat of most shoot-'em-ups is destroying waves smaller enemies but the end of level boss is a staple of the genre. We like them big and mean.

IN THE ZONE
■ Some of the best titles throw enough action your way to provide an almost hypnotic experience, from games like *Tempest* to the modern bullet-hell shmups.

AWESOME SHIPS
■ It's fun to pilot a snazzy looking ship such as *Gradius*' Vic Viper or *R-Type*'s R-9 fighter. Failing that give us a Penguin or maybe even an Octopus.

POINTS MEAN PRIZES
■ Shooters aren't about story so the better titles focus on scoring mechanics in order to get players coming back for more.

FIREPOWER
■ There's nothing like blasting through with a barrage of munitions from lasers, missiles, and defensive Force Pods to Smart Bombs.

1996 1997 1998 1999 2000 2001 2002

RAYSTORM
■ One of the first shooters to feature 3D polygon-graphics, this was the sequel to Taito's *RayForce*, a game that introduced an innovative lock-on laser mechanic.

EINHÄNDER
■ One of the first 3D console shooters, Squaresoft's PlayStation shmup had an ingenious weapon system built around collecting and using various gunpod power-ups.

BLAZING STAR
■ This sequel to *Pulstar* had a more score-oriented approach with a multiplier system, and a button-hammering weapon system.

IKARUGA
■ The sequel to *Radiant Silvergun* implemented a colour-switching mechanic allowing players to absorb enemy bullets and unleash a fierce screen-clearing counter.

Bluffer's guide



ANDREW BRAYBROOK

We chat to the creator of the best-selling Commodore 64 shoot-'em-up, Uridium

What are your early memories of encountering shoot-'em-up games in the arcades?
I was still at school and there was a cool bar nearby that had videogames in it, starting with a vector game that was based on *Star Trek*, and they added a *Space Invaders* machine later on. We would go there at lunchtime and have a coke each and play the games. That would have been 1978 or 1979.

Did you have any favourites, or ones which perhaps inspired you to create your own games?
I think it's reasonable to say that we loved them all, from *Asteroids*, *Scramble* and *Galaxian* to the later *Slap Fight* and *Space Harrier*. The graphical look of *Star Force* certainly inspired the look of *Uridium*, from the colour scheme to the shapes.

Do you think early home computers lent themselves well to emulating arcade-like shooting games?
The C64 had characters and sprites, rather like the arcade machines of the time, except that the arcade machines had a lot more colours and a lot more sprites. By the time the Amiga came along we had the colours of the arcade machines but not the sprites. We knew we were chasing better hardware on the arcade machines all the time.

What features do you think make for a truly great shoot-'em-up game?
You need plenty of bullets, a generous collision-detection system, some really nice power-ups to just tip the balance in your favour, and some moments to catch a breather. Not having enemies that mindlessly crash into you is also good… I prefer to have fire-fights with the enemy rather than have them just try to run into me. I'm not a great fan of end of level bosses either, as they tend to be rather restrictive as they take up much of the screen space, and unless you're well powered up you won't beat them. I also prefer games to not play exactly the same every time. *Dropzone* on the Atari is certainly a game I played a lot of and fits most of the criteria.

Why do you think there were so many shoot-'em-up games produced in the Eighties and Nineties, many that were incredibly popular?
It's a nice simple concept and easy to get into, with any number of directional possibilities and scenarios. The kill or be killed scenario is quite timeless.

▶ artist Stephen Rushbrook, who worked on the game's Amiga sequel. "For starters it was mean. The levels seemed absolutely huge and the speed was incredible. You flashed over the decks of those Laviathans in scant moments. The game was always saying how fast do you dare to go?" Alongside Archer Maclean and his accomplished *Defender* tribute, *Dropzone*, C64 programmer Tony Crowther was also heavily influenced by Eugene Jarvis' baby. "I fell in love with scrolling games, and the C64 was probably the best machine for handling scrolling at 60fps," he says. "*Defender* was a game that I admired, and I think that Steve Evans' version [*Guardian*] by Alligata was the best clone I've seen of it. *Defender* is still influencing games today, just take a look at Sony's *Resogun*."

Sensible Software's *Wizball* was another original scrolling shooter that owed much to classic coin-ops, as did a number of the company's later releases, including a utility that allowed users to create shooting games of its own. "Back in the Eighties us developers were all heavily inspired by the top arcade machines of the day and the shoot-'em-ups were often leading the way," says Sensible supremo, Jon Hare. "Games such as *Nemesis (Gradius)* and *Salamander* heavily shaped our early work on *Wizball*. *Galax-i-Birds* was essentially a budget game that we managed to sling together in about a week between *Parallax* and *Wizball* as a bit of light relief, it was basically a piss-take based on *Galaxian*… Aside from the Shoot-'em-up Construction Kit, our other adventure into the world of shoot-'em-ups was the

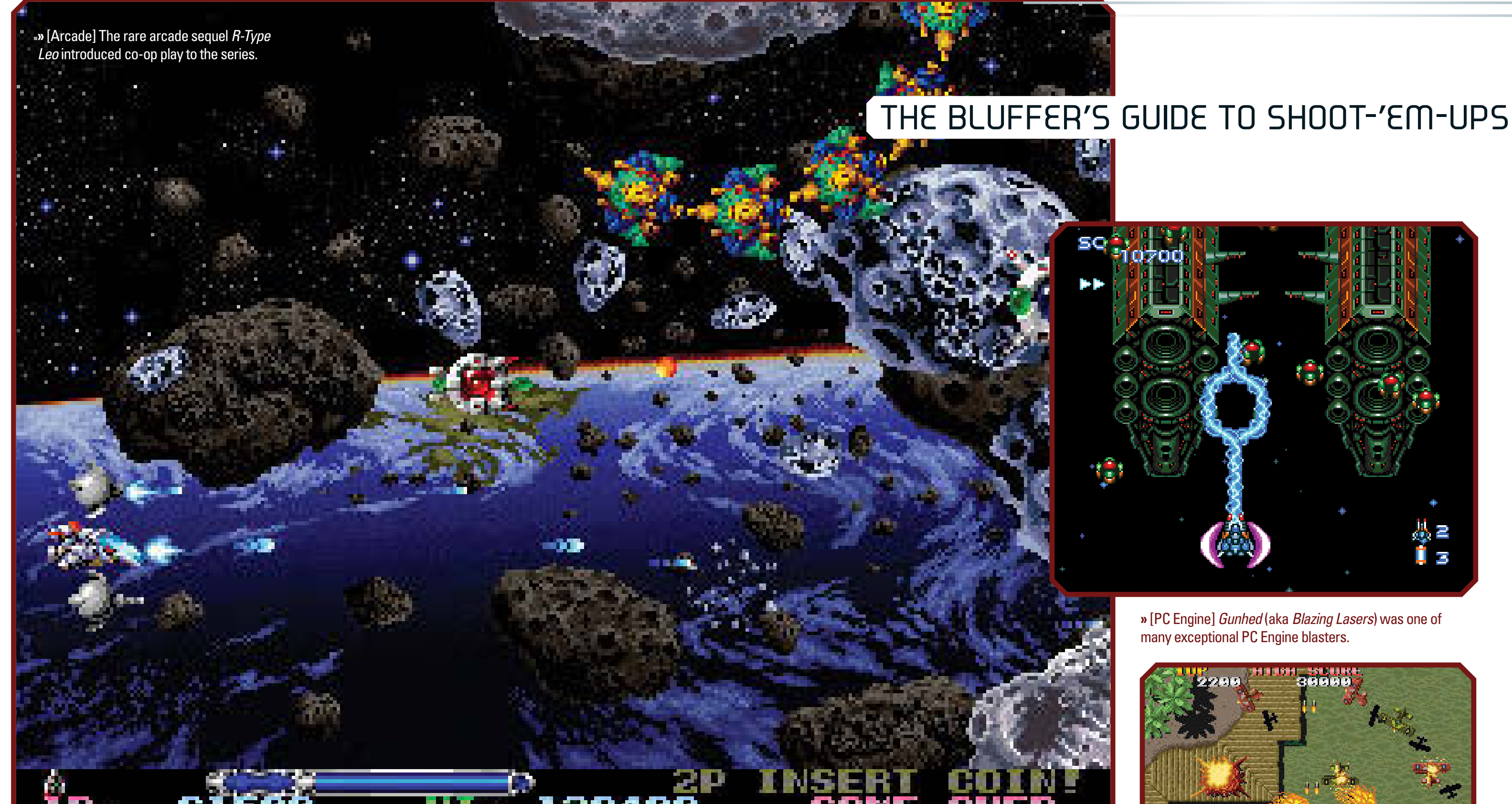


» [Arcade] A fully tooled up tentacle-fighter in Irem's *XMultiply*.

BORDER DOWN
■ The arcade debut of G.rev, a company formed by ex-Taito employees, *Border Down* was one of the best shmups to make it onto Sega's Dreamcast console.

2003 — 2004 — 2005 — 2006 — 2007

DEATHSMILES
■ Along with *Akai Katana* and *DoDonPachi Resurrection* this was one of a handful of recent Cave titles to be published in the West, courtesy of Rising Star Games.



» [Arcade] The rare arcade sequel *R-Type Leo* introduced co-op play to the series.

» [PC Engine] *Gunhed* (aka *Blazing Lasers*) was one of many exceptional PC Engine blasters.

» [Arcade] Japanese coin-op manufacturer ,Toaplan, was famous for shoot-'em-ups like *Flying Shark*.

> "We were all religiously going to our local arcade and always ended up playing Salamander"
> Robin Levy



» [Arcade] With its copious pink bullets, *Batsugun* is widely regarded to be the first bullet-hell shooter.

Defender-influenced *Insects In Space*, which was our last game for the C64."

Other programmers of C64 games like *IO* and *Armalyte* also express their debt to coin-op shooters by Konami and Irem among others. "The games which had the most influence for *IO* were *Nemesis* (*Gradius*), *Salamander*, *R-Type*, and *Darius*," says programmer Doug Hare. "Relative to the other computers at the time, the C64 was a great platform for writing shoot-'em-ups. The combination of hardware sprites and scrolling as standard made it an absolute joy to work on."

"We were all religiously going to our local arcade and always ended up playing *Salamander*," reveals Robin Levy, graphic artist on *Armalyte*. "We loved the flow and feel, but there were lots of bits from other games that we tried to emulate. *Galaga*-style shooters, in particular, the way the player can wipe out an entire wave of enemies in a sweet spot, and *Nemesis*, just because it was the first real example we saw of upgrades and mothership bosses. One of the things we liked about the Konami shooters was the visual clue that if you could shoot through a gap you could move through it, this also meant that the player collision was smaller than the actual player sprite – something that bullet-hell shooters do now. *R-Type*'s influence was predominantly visual as we only saw it in magazines. For single player, we had an extra sprite; we liked the multiples in *Nemesis* and *Salamander* and saw screenshots of the Force in *R-Type and* so our 'Remote' was born."

But what was it that made for an addictive and enjoyable shoot-'em-up? "For me, it's all about the feel," says Malc. "Being in perfect control of your ship, becoming fully tooled up, and wreaking havoc all around, whilst dodging waves of incoming baddies and bullets. I've got fond memories of playing *Vulcan Venture* [*Gradius II*] in arcades, twirling my four multiples around and spitting hot death, Konami tunes blasting, avoiding the viciously jaggy scenery and hoping that invincible buzz would last long as I could hang on to the joystick. Shoot- ▶



SINE MORA
■ A side-scrolling bullet-hell shooter from Japanese developer Grasshopper, *Sine Mora* featured a time-rewinding mechanic similar to those seen in racing games.

TXK
■ This isn't the first game of Jeff's to draw inspiration from *Tempest*, but it's arguably his best. A brilliant twitch shooter that every PS Vita own needs to play.

RESOGUN
■ From *Super Stardust* developer Housemarque, the *Defender*-inspired *Resogun* is possibly the most technically advanced shoot-'em-up ever created.

Bluffer's guide

ARMADA OF ANNIHILATION

Some of the funkiest spaceships in the world of shmups

SPACE INVADERS
ASTEROIDS
GALAGA
DEFENDER
TIME PILOT
GYRUSS
R-TYPE
SALAMANDER
PULSTAR
GRADIUS
PARODIUS
PARODIUS
SCRAMBLE
AXELAY
DARIUS GAIDEN
XMULTIPLY
XEXEX
ZERO WING
RAIDEN II
RAYFORCE



» [Arcade] Konami's awesome *Xexex* mixed elements of its *Gradius* titles with weapon ideas from Irem games like *R-Type* and *X-Multiply*.

'em-ups are visceral beasts and cause worrying palpitations at their best. The fear of death and having to restart way back is a gameplay feature I miss in modern games that you can just waltz through."

At this point shoot-'em-ups were diverging into a number of sub-genres including twin-stick shooters like *Robotron* and *Smash TV*, run-and-gun games with human protagonists like *Commando* and *Ikari Warriors*, and 3D-style games such as *Tempest* and *Space Harrier*. The colourful 'cute-'em-up', typified by *Parodius*, *Twinbee* and *Fantasy Zone* showed that shmups needn't be restricted to moody space vistas and lone starfighters battling to save the Earth. New consoles like the SNES, PC-Engine, Neo-Geo and Sega Saturn gave us brilliant home versions of the likes of *R-Type*, *UN Squadron*, *Gradius 3* and *Battle Garegga* along with original blasters like *Super Star Soldier*, *Pulstar* and *Radiant Silvergun*. New 3D graphics technology allowed for polygon blasters like *R-Type Delta* and *Raystorm* on machines like the PlayStation, and with a little-known *Toaplan* shooter called *Batsugun*, a new evolution of the classic 2D shooter was born – the bullet-hell shoot-'em-up.

Two new Japanese companies, Raizing (producers of *Battle Garegga*) and Cave (creators of *DoDonPachi* and *Progear*) formed from ex-Toaplan staff in the mid-nineties to bring us a third-generation of arcade shmups featuring intricate graphics, deep scoring mechanics and lots of bullets. Today Cave remains one of the last surviving manufacturers dedicated to the classic 2D shooting game with recent arcade and console releases like *Deathsmiles* and *Akai Katana*. "I love bullet-hell shooters but Cave lost its way latterly," laments Malc. "Pink lasers and Loli do absolutely nothing for me, and that's what ruined its latest titles, together with a degree of gameplay stagnation. However, in its heyday, with the likes of *Dangun Feveron*, *DoDonPachi*, and the mighty *Guwange*, they were unbeatable in that Cave was not afraid to innovate in its games. I do like my manic shooters, but I probably prefer more considered and tactical efforts like you see in *R-Type*, or single screeners like the often-overlooked *Gaplus*."

> "The shoot-'em-up genre was a natural for the early development of gaming"
> Eugene Jarvis

However, it was arguably in the arcades, where they began, that shoot-'em-ups carved many of the happiest memories for many fans. "The way you could breeze in, and leave a high score and walk out again, arcades made it all about the competition with the others that were there," says Malc. "Playing with friends, meeting up to see what the latest game was… the day that *Salamander* arrived was really special. Ten strangers queuing up excitedly and working out strategies together… Consider the physicality of joysticks and huge cabinets to wrestle with – that's a big loss when becoming intimate with a shmup on a modern console."

"The shoot-'em-up genre was a natural for the early development of videogaming," says Eugene Jarvis. "The elements of trajectory and collision and life and death were very basic and easy to communicate to the player with primitive graphics. The most basic instinct of


» [PlayStation 4] The amount of pixels that the recent *Resogun* shifts about is quite astounding…

life is survival. Shooter games tapped into this most important primal drive – the fight or flight, kill or be killed instinct. Of course in the last few decades the classic 2D shooter gave birth to its 3D counterparts. *Doom* pioneered the first-person shooter genre so omnipresent in today's gaming scene. Starting with the primitive tank shooting games of the Seventies, we now have *World Of Tanks* and other amazing 3D sims. But like the ancestral rat which started the massive diaspora of mammals we see today, the classic third-person 2D shoot-'em-up remains virtually unkillable, the twin-stick variant being particularly very much alive in today's gaming scene." As we go to press Eugene's words are vindicated by the fact that one of the fastest-selling downloadable games on the PlayStation 4 at the is an old-school twin-stick shooting game, *Helldivers*. The golden age of the shoot-'em-up might be over, but it seems like people are still hooked on blowing up space bugs…. *



» [PS Vita] Jeff Minter's most recent game was the superb *TxK*. Sadly, it's no longer heading to other systems.





JULLIAN RIGNALL

A chat with the high score king

You were a UK champion at *Defender* – was this a game that excited you? Do you think it was influential on shoot-'em-ups?
Yeah. It had a wrap-around scrolling screen which I think was the first of its kind. But what it really showed was just how sophisticated shooter AI could be. The enemies in the game felt distinctive and different, and had their own reason for being there. Baiters – the enemies that would emerge if you took too long to complete a level were particularly difficult to get rid of, and seemed to anticipate your moves. They felt almost lifelike in the way that they behaved - quite an achievement for a game that was from the Eighties.

Back in the mid-Eighties you could walk into an arcade and play games like *Gyruss, Defender, Nemesis, Salamander*... shoot-'em-ups were everywhere. Do you miss those days?
Well, the weird thing is that we have a bar in San Francisco that's filled with old arcade games, including several you just listed. So I can go there anytime and play – which is rather nice. But generally, I do miss arcades. There was something to be said about going into a new arcade and seeing something that you'd never played before. Hard to think these days that arcades were where all the cutting edge games were at. Now they're all on home consoles – which isn't necessarily a bad thing.

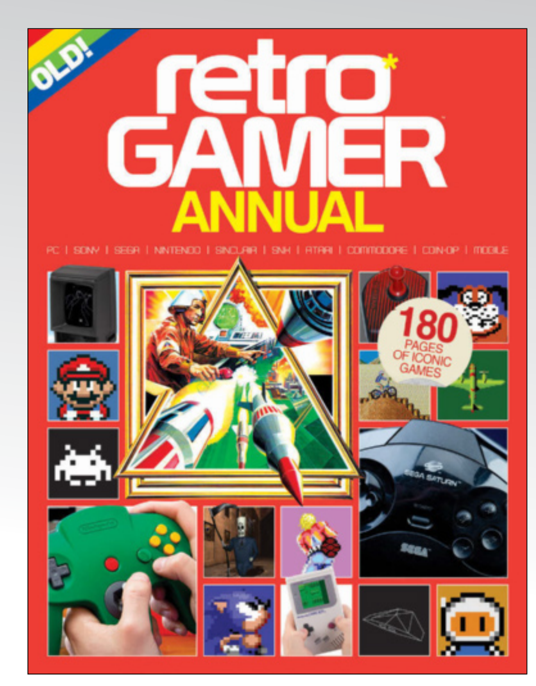
In *Zzap!64* you were known for having a loving shoot-'em-ups. What was your favourite shmup?
Dropzone without doubt. What was great about that game is that it was designed around the C64's one button joystick. It was a *Defender* clone, but it wasn't trying to be *Defender*. I still think it's one of the greatest games on that machine.

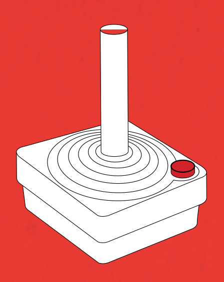
What kind of features did you look for when you reviewed a shoot-'em-up in order for it to get a good score?
It had to be fun first and foremost. Feel of the controls was also important, followed by the AI, the graphics and sound. Ultimately, it was all about the entertainment that it delivered, and whether it was worth the money or not.

There were loads of shooters on early home computers like the C64, do you think this was a good thing or were there too many?
There was a period where we'd roll our eyes when yet another shooter arrived at the offices. I remember reviewing tons of them – a lot of them were decent, but not brilliant, and they were always a pain in the arse to write about because you just wouldn't know what to say. You just started to run out of phrases and would have to be creative to try to think of new ways of saying "this is an average shooter." At least with the good ones and the really bad ones you could have fun writing about those. Particularly the bad ones!

Do you still play any shoot-'em-ups and if so which ones have you tried recently?
Absolutely! *Helldivers* was one that I reviewed quite recently, and I really enjoyed that. It is a super-tough game, but it's also thoroughly enjoyable. In my advancing years, my reflexes are unfortunately slowing down somewhat, but at least I have years and years of experience to make up for that, so I'm still reasonably decent at playing them!


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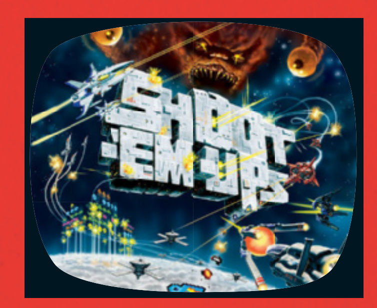
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